

Municipal Journal

Volume XXXIV.

NEW YORK, APRIL 17, 1913

No. 16



FRONT VIEW OF PASADENA INCINERATOR.
Garbage wagon is standing on the scale, where all loads are weighed.

PASADENA'S REFUSE INCINERATOR

Located Where Absence of Odors is Imperative.—Unique Method of Receiving Garbage and Charging Furnace.—Distillate Used for Fuel.—Steam to be Furnished to Municipal Lighting Plant.

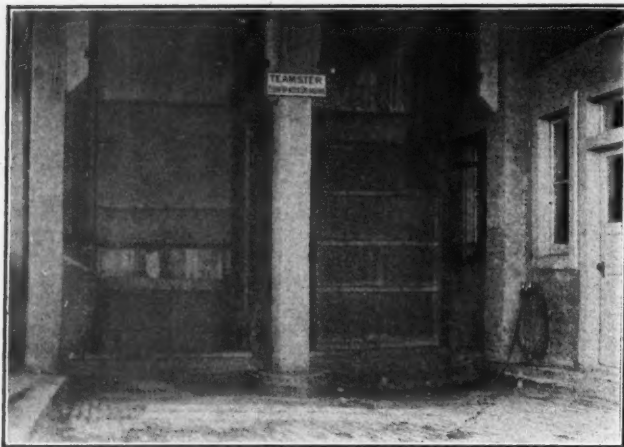
By C. L. EDHOLM.

The refuse incinerator of Pasadena, California, is located in a district surrounded on all sides by exclusive hotels, and by residential districts of the sort that has given Pasadena the distinction of being known as the city of millionaires. Not that these tourist hotels and mansions are in immediate proximity to the incinerator, but they are within sight of its 152-foot smokestack and within easy range of its odors, if there were any.

The incinerator has been in operation for about three months, receiving about 16 tons of refuse every day, of which approximately 66 per cent is garbage and two-thirds of this is very wet. No system of draining or storing is in use, and until the last of February the present ordinance requiring that garbage collected from residences be wrapped in papers was not in force. A further difficulty is the independent rubbish collection system. This means that the supply of combustible ma-

terial, such as papers, brush, etc., is not received with any regularity. Until the supply of dry rubbish can be better adjusted, it will require the use of distillate or crude oil as fuel, the former being used at present.

The building containing the incinerator, which is of the Fredsmith type, is an attractive structure of reinforced concrete. It has two floors and a mezzanine, and has the dimensions of 44 by 52 feet, and a height of about 38 feet. At the rear is a chimney of reinforced concrete lined with fire brick, 152 feet high. An architectural feature of its construction that gives it a slender and light appearance is the slight inward curve of its outline, which amounts to 12 inches for its entire length. Beauty is a feature usually ignored in structures of unqualified utilitarian purpose, but in this case the entire effect is pleasing. The other dimensions of the chimney are a diameter of 13 feet at the base and 5



GARBAGE ELEVATORS, ELECTRICALLY OPERATED.
Bucket flush with curb. Bucket raised 6 feet.

feet 10 inches at the top, exterior measurements. The thickness of the concrete wall of the chimney is 12 inches at the base and 5 inches at the top. It is lined for its complete height with fire brick in telescopic sections, which are removable independently. It rests upon a foundation of solid concrete 10 feet deep and 36 feet in diameter.

The building, of which the furnace is an integral part, is of reinforced concrete throughout. No structural steel is used except the reinforcing rods. The walls have a thickness of 18 inches, with an additional 14 inches of firebrick lining the furnace.

There are four furnaces, which can be used as a unit or separately. A feature of the Pasadena incinerator which is not found elsewhere is the receiving and loading system. The wagons drive to the rear of the building, passing over the weighing scales on the way. On either side of the chimney is a door of the receiving station, which is roofed and enclosed on three sides. Four plate metal containers are installed to receive the garbage as it is dumped from the wagons. Each receptacle will take an ordinary wagon load, about two tons, and it is easy to empty the wagons into them as they are lowered until their upper edges are flush with the ground. These containers are elevated by two electric hoists, one for each pair, on tracks that lead up to the mouth of the

furnace on the top floor. When the car full of garbage reaches the top, the curve of the track swings it almost upside down, the open mouth of the container being brought against the door of the furnace, while its base is several feet higher, and the contents thus rest upon the door of the furnace. When this barrier is drawn up by the hoist, the entire contents of the garbage container slide into the furnace and the door is dropped into place at once. In this way it will be seen that the furnace is charged without admitting a rush of cold air, or permitting smoke or gases to escape.

Some of the advantages of this elevator system are that all wagons can unload on ground level, so that the expense of building an incline for the teams is eliminated. The method of handling is very sanitary, as the wagon dumps directly into the container, and any small fragments that fall outside are readily swept into the receptacle. The entire enclosure is open to the morning sun, and to the fresh air, and it

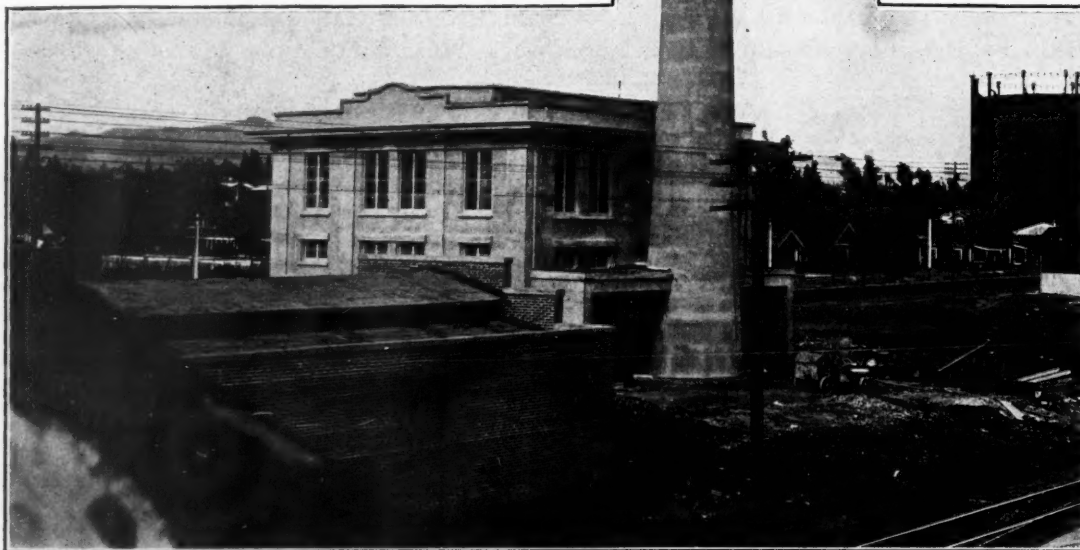
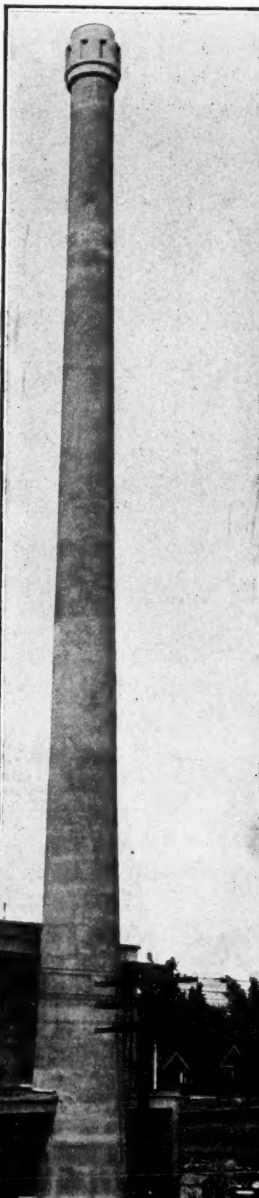
is easily kept clean by hosing. No odor of garbage clings to this or any other part of the incinerator plant. The cost of operating the hoists that lift these self-dumping containers is only 25 cents a day for power, and they do not require the services of an extra man.

The power for operating the elevator, the fan and compressor is received from the nearby municipal lighting plant. It is charged against the incinerator and amounts to about \$1.50 a day. For the hoist, one to three k. w. are required, $2\frac{1}{2}$ k. w. for lighting and 30 to 42 k. w. for the compressor and blower.

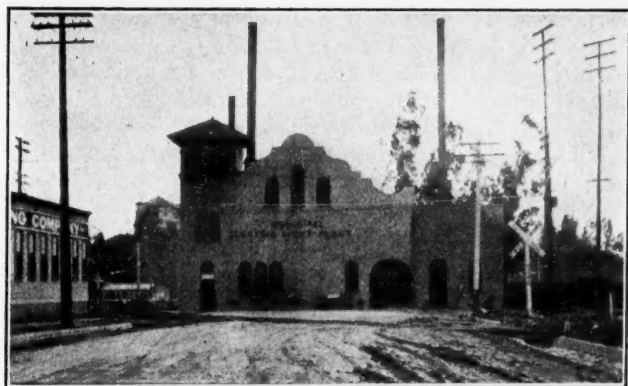
The garbage is delivered direct to the furnace, which is kept at a temperature of from 2,400 degrees to 3,000 degrees Fahr., while the rubbish falls into the combustion chamber, where a temperature of at least 1,250 degrees Fahr. is maintained. Sprays of distillate and fresh air produce a hot flame that speedily reduces to clinker wet garbage and even carcasses of

horses, cows and dogs. At present about 60 to 80 gallons of distillate are required to 16 tons of garbage reduced, but this cost will probably be reduced with the proper adjustment of the dry rubbish delivery.

The ashes fall through the clinker chute into a cooling room below the furnace, and are not drawn out on the incinerator floor to be shoveled out of the way. From the cooling room the clinker drops directly into large metal wagons, and



REAR VIEW OF PASADENA INCINERATOR.
Entrances for teams with garbage on both sides of the chimney.



PASADENA MUNICIPAL LIGHTING PLANT.

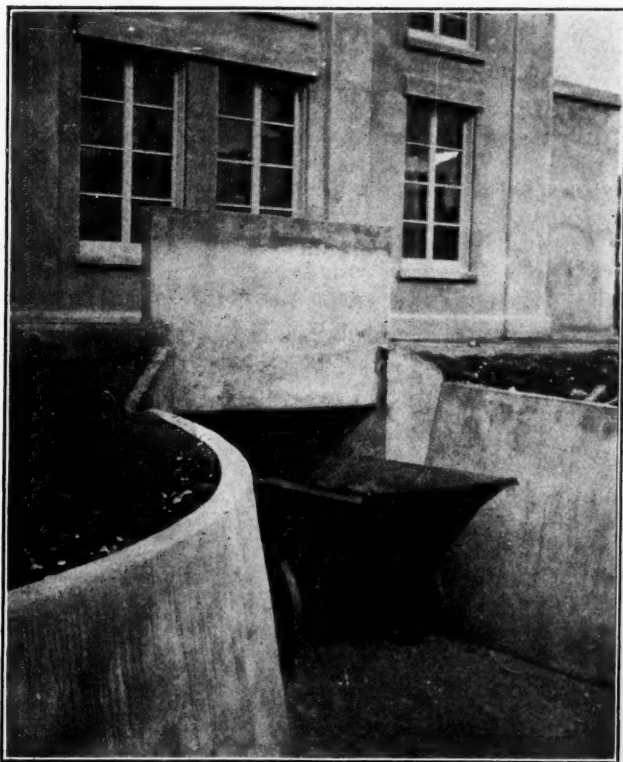
Will receive steam from incinerator, which is 500 feet away.

is conveyed by them to the dump, offering a material for filling low lots which is sanitary and inoffensive. A passageway runs under the building, with an entrance on one side and an exit on the other, for the use of the clinker wagons. This runway is also used to supply air, which is drawn into the furnace by means of a fan when forced draught is required.

A contemplated addition to the incinerator is the installation of a large boiler over the furnace, for generating steam power for the municipal lighting plant. It is not known when this will be installed, but the building was planned to allow for this feature.

Though the incinerator is receiving about 16 tons of mixed refuse per day, it has a guaranteed capacity of 30 tons. The present cost of incineration is about 50 cents per ton, all charges included. Two firemen constitute the labor force, and these men operate the hoists and make themselves generally useful, as the firing by distillate requires little time or labor.

Although definite figures regarding the operation of the Pasadena incinerator are not yet available, as the test of this plant is not yet finished, a reference to the detailed table of costs for an incinerator of the same type in the city of Portland, Ore., will be instructive.



PASSAGEWAY FOR CLINKER WAGONS.

The latter was built in November, 1910, at a cost of \$100,000, exclusive of site, and has a guaranteed capacity of 150 tons a day, although it has burned as high as 187 tons in a single day. It serves a city of about 210,000 population, so is a much more extensive plant than Pasadena's \$46,000 incinerator. The tables for Portland follow:

REPORT OF EFFICIENCY OF THE FREDSMITH DESTRUCTOR FOR SIX MONTHS UNDER OPERATION BY THE CITY OF PORTLAND, OREGON.

	Total Refuse tons	Average per day tons	Average Cost per Ton			
			Total cts.	Fuel cts.	Labor cts.	Supplies & Repairs cts.
1912						
May	3,749	139	30	None	29	1
June	3,994	159.75	30	"	28	2
July	4,120.25	152.75	31	"	28	3
August ...	4,226	156.5	31	"	28	3
Sept.	3,750.5	150	33	"	30	3
Oct.	3,760.5	139.75	34.5	"	30	4.5
Total ..	23,600.25	897.75	189.5	None	173	16.5
Avrge. for 6 mos...	149.625	31.6	None	29		2.75

MONTHLY REPORT OF CREMATORY.

Portland, Oregon.

June 30, 1912.

To the Honorable Mayor and Board of Health:

Gentlemen:—

I respectfully submit to your honorable body a report of the expenditures of the crematory for the month of June, 1912.

Garbage incinerated 3,092 tons
Manure incinerated 550.5 tons
Trash incinerated 351.5 tons

Total 3,994 tons

Percentage of each class of refuse incinerated:

Garbage 77¼%
Manure 14¼%
Trash 8½%
Cost per ton fuel..... None
Cost per ton labor..... 28c.
Cost per ton supplies and repairs..... 2c.

Total cost per ton..... 30c.

Average refuse incinerated per day..... 159¾ tons

Horses incinerated 19
Dogs incinerated 130
Cows incinerated 3
Hogs incinerated 10
Calves incinerated 1
Bear incinerated 1

Detail of operating expense of crematory:

Salaries—

Superintendent \$150
Engineer 100
Foreman 100
Weigher 100
5 to 6 Firemen..... 440
3 to 4 Laborers..... 225

Total salaries for crematory..... \$1,115

Supplies and Repairs—

One arch plate pattern for fire door..... \$5.50
6 grate hanger castings, 740 lbs. @ 5c..... 37.00
One cast-iron arch plate, 355 lbs. @ 3½c..... 12.43
3 lbs. taps for wiring..... 1.05
Repairing and forging furnace tools..... 12.85
To dressing and tempering 6 chisels..... 1.00
Lighting crematory for May..... 6.50
Making 6 brackets (wrought iron), drilling and furnishing 12 bolts..... 4.35
6 bamboo brooms and handles for same..... 3.13

Total supplies for crematory..... \$83.81

Complete operating expense of crematory:

Total cost fuel..... None
Total salaries \$1,115.00
Total supplies and repairs..... 83.81

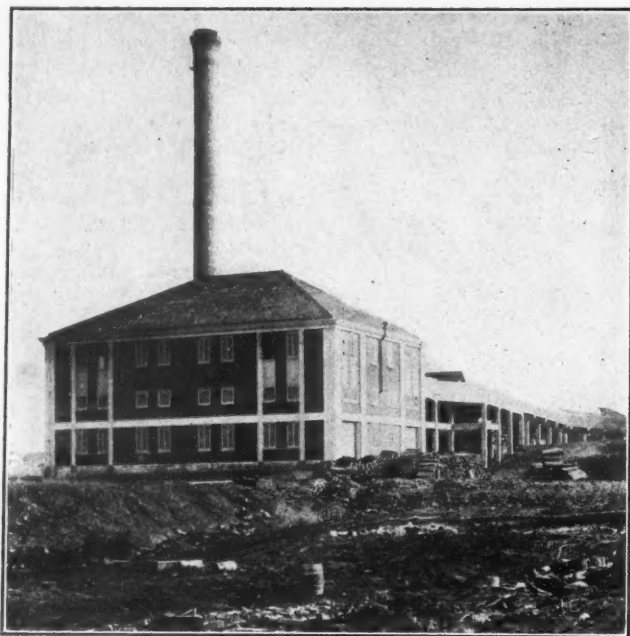
Complete total \$1,198.81

Expense of barn..... \$226.00

Detailed expense of city dry dump:

One man on dump..... \$75.00
One man on ash car dump..... 75.00
One man for road and yard..... 75.00

\$225.00



PORTLAND, OREGON, INCINERATOR.

Total expense of all departments:	
Total expense of barn.....	226.00
Total expense of crematory.....	\$1,198.81
Total expense of city dry dump.....	225.00

Complete total for all departments.....\$1,649.81
 Respectfully submitted,
 (Signed) D. E. OTIS,
 Superintendent.

PREVENTING HYDRANTS FROM FREEZING.

In a discussion of this subject before the International Association of Fire Engineers, a number of methods employed by different cities were brought forward. The discussion was opened by Chief Ringer of Minneapolis who stated that he preferred the type of hydrant which carried about half an inch of water above the valve, for two reasons: First, water on both sides of the valve keeps the valve moist and does not allow the leather above the valve seat to shrink. Second, during the winter season the inspectors, by dropping a string with a weight attached down the hydrant barrel to the valve and withdrawing it, can determine by the wetting of the string or weight whether or not the hydrant is frozen. Should the hydrant be found frozen, it can be opened and the pressure of water will break the half inch of ice, which it could not do if the ice were of greater thickness about the valve.

Where the hydrant is frozen to such an extent that it cannot be opened a few pails of a solution of hot water and salt are poured down the barrel and allowed to stand for a few minutes. Where the hydrant or branches are found to be frozen solid, Mr. Ringer recommends the use of a steam hose but warns against the use of steam oftener than is necessary, believing that it tends to shrink the leather on the valves.

Some of the hydrants in Minneapolis have been set in low lands where the ground water comes nearly to the surface, and the water in the barrels of these was pumped out and the barrels filled with salt brine, which is found to keep the hydrants from freezing, although there is the objection that the brine has to be replaced every time the hydrant is used.

Chief Knofflock of Mansfield, Ohio, stated that about the first of October he removes from the barrels of all hydrants any water which might be in them and is never troubled with freezing unless the thermometer reaches 20

below zero, during which weather he has an inspection made every day and if the hydrant is found frozen, uses steam to thaw it out. He had never found the valve leathers injured by the steam. Incidentally, he stated that he oiled all hydrants twice a year, using heavy oil that does not become solid in cold weather, and all the hydrants of his city can be opened with practically no effort.

Chief Espey of Elmira, N. Y., objected to the use of steam, but used hot water whenever he found a hydrant frozen, pouring the water around the frost jacket. He stated that even a well placed hydrant will sometimes fill with water and freeze because the drip which drains the barrel is stopped by roots of trees. Chief Humphreys of Pittsburgh, when he has a steam fire engine handy, pushes the steam hose down a hydrant barrel and thaws it out in this way, but he was in doubt what could be done where gasoline pumping engines were employed. Replying to this, Chief Johnson of Superior, Wis., said that his engines carry about a gallon of alcohol with them, and if a hydrant was found frozen the instructions were to throw about a pint of alcohol into a hydrant and then proceed to the next hydrant; in a few minutes the hydrant in which the alcohol was used would be found thawed out.

In Hamilton, Ont., according to chief Teneyck, a man is sent out after every fire to see that the hydrants used are placed and left in good condition. With a torch he thaws all the ice from the nozzles, oils the caps and the spindle and sees that the valve is tight. Mr. Teneyck stated that there is a vault about 3 feet square around most of the hydrants, and the water-works department builds a fire in this vault, which usually is effective in thawing out the hydrants. Sometimes, however, the hydrant is disconnected and removed altogether and thawed on the surface. Chief Kenlon of New York is in favor of using electricity for thawing hydrants and pipes, and has also used steam on dozens of hydrants and has not found its use detrimental.

PAVEMENT CUTS IN HAMBURG.

In the city of Hamburg, Germany, no cuts can be made in the street pavement, and, indeed, no work of any kind performed on public territory, without a special permit from the building department, which reserves to itself the right to restore the street or sidewalk pavement at the expense of the parties interested. This admirable practice is followed in several cities in the United States; but less customary is the practice in Hamburg of holding an annual meeting which is called by the director of underground works. These meetings are attended by eight members and a secretary of the public building department, four members of the street railway companies, and one representative each of the electric lighting and power, the gas company, the water works, the traffic police department, the fire department and the telephone and telegraph department. The object of these meetings is to so plan work involving the tearing up of the streets that derangement of traffic and annoyance involved may be reduced as much as possible. At the 1912 meeting 584 different items were considered, nearly all of which related to the repair of street pavements. The program setting forth the items which are to be discussed is sent out in advance to those who will attend the meeting, and at the meeting arrangements are made to have all the necessary work in a given locality performed at the same time, as far as this is possible. These annual meetings have proved to be extremely useful, not only in reducing the cost of the work but in minimizing the inconvenience to the public.

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CHANGE OF ADDRESS

Subscribers are requested to notify us of changes of address, giving both old and new addresses.

Contributions suitable for this paper either in the form of special articles or of letters discussing municipal matters, are invited and paid for.

Subscribers desiring information concerning municipal matters are requested to call upon MUNICIPAL JOURNAL, which has unusual facilities for furnishing the same, and will do so gladly and without cost.

APRIL 17, 1913.

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Manager Plan of Government for Hickory.

The city of Hickory, N. C., which has a population of 3,716, has adopted the plan of operating through a city manager on precisely the same lines as are followed out in Sumter, S. C., as described in The Municipal Journal of October 24, 1912. Sumter, which has a population of about 10,000, in January selected M. N. Worthington, a civil engineer, as its first city manager with a salary of \$2,400. The new Hickory charter provides that the city manager "shall have the power to revoke licenses pending the action of the City Council." "He shall have authority and charge over all public works, the erection of buildings for the city, the making and construction of all improvements, paving, curbing, sidewalks, streets, bridges, viaducts, and the repair thereof; he shall approve all estimates of the cost of public works, and recommend to the City Council the acceptance or rejection of the work done or improvements made; he shall have control, management and direction of all public grounds, bridges, viaducts and public buildings; he shall have control of the location of street car tracks, telephone and telegraph poles and wires; he shall have charge of the water sheds from which the city takes its supply of water, pumping station, pipe line, filter apparatus, and all other things connected with or incident to the proper supply of water for the city; and shall secure all rights of way and easements connected with the water works or sewerage sys-

tems or the extension of the streets, etc. All the powers enumerated, however, shall be exercised subject to the supervision and control of the City Council." The election of the first City Council under the new charter in Hickory will take place on the last Monday in April.

Theft of Water Through Fire Services.

In an investigation of the matter of sprinkler systems, fire service, etc., made by F. A. Raymond, Engineer of the National Board of Fire Underwriters, one of the points investigated was as to what precautions were taken by various cities against theft of water. In answer to his inquiry, only five cities reported taking no precautions, and none of these were private companies; 18 depended upon inspection only, several of these finding it unsatisfactory; 13 required detector meters and four of these also required valves and hose valve connections to be sealed; 11 depend upon inspection and sealing, and the remaining eight of the 55 cities replying require seals, ordinary meters, permit no other connection or require the owner to give a bond not to use water illegally.

From the replies, Mr. Raymond concluded that inspection alone was unsatisfactory, but in conjunction with sealed outlets seemed to work all right. Detector meters appear to be satisfactory, but are expensive. Several cities state that meters will be installed if any water is used illegally. The experience of the majority appears to be that illegal use of water may be prevented with a fair amount of certainty. Where the detector meters are objected to on account of expense, the prohibition of other connections from fire lines, sealing of test and draw-off valves, hose gates, etc., and regular and careful inspections have been found effective. The property owner, he believes, would not object to a charge sufficient to pay for monthly inspections or tests.

In regard to the theft of water, he believes that if persons stealing water were as fairly certain of prosecution as other thieves, there would not be so much stealing of water. A Michigan city, for example, recently recovered \$20,000 damages from a large corporation for theft of water from an unmetered sprinkler connection, but no one was prosecuted criminally. If a gang of thieves had stolen that amount from the corporation in question there is no question but that they would be imprisoned for the offense, but the officers of the corporation in question were "respectable" business men and so were let alone to steal more water whenever, in the course of political events, the city shall have a less wide-awake or more subservient mayor and water commissioner.

It may be added that as Mr. Raymond represents the underwriters, who would only be interested in the effectiveness of the sprinkler system and very little in the revenue of the water company or water department, it would seem only natural that the case would be understated by him rather than overstated.

Imhoff Tank Patents.

Editor Municipal Journal, 50 Union Square, City.
Dear Sir:

We note in your April 3 issue, page 498, under head of "Sewerage and Sanitation" that "as holders of the Imhoff patents we had sent ultimatum to the city of Pasadena to pay the Imhoff fee, or do without."

We believe you do not intend to place us, or Dr. Imhoff in the light of making any such demands, as this is not our attitude and never has been, as the cities decide for themselves whether they will use the Imhoff tank or not, and we ask you to be good enough to correct the impression given in your issue of the 3d.

Very truly yours,
PACIFIC FLUSH TANK CO.,
S. Fischer Miller, Pres.

(Commercial Representatives of Dr. Karl Imhoff).

TABLE NO. 1.—ORIGINAL PAVING DONE DURING 1912.

CITY.	Sheet asphalt. block.	Granite, sandstone or other stone block.	Brick or clay block.	Cresoted wood block.	Concrete.	Bitu-lithic.	Bituminous—Macadam.	Plain or water-bound macadam.	Gravel.	Other kinds.	Proportion of pavement assessed on property owner.	Kind of pavement determined by
Arizona:												
Phoenix	.....	.....	.....	.....	.....	50,000	.....	.....	.....	.....	All	City Council.
Arkansas:												
Helena	.....	.....	15,570c	.....	.....	6,000c	.....	.....	.....	.....	All, but st. intersections.	Property owners.
California:												
Pasadena	3,290c	.....	.....	.....	.....	.....	5,820c	.....	.....	5,57c	All, but st. intersections.	Property owners' petition.
Petaluma	.....	.....	.....	.....	.....	.....	13,606c	.....	.....	.....	All	City Council.
Riverside	.....	.....	.....	.....	.....	.....	25,888	.....	116,557	.....	All for macadam, none for gravel.	Property owners' petition.
San Francisco	128,415	20,919	.....	.....	.....	.....	121,233	56,131	.....	4,449	All	City Council.
Santa Rosa	12,500c	.....	.....	.....	.....	.....	.....	20,000c	.....	.....	All, but st. intersections.	City Council.
Colorado:												
Denver	.....	.....	.....	.....	.....	.....	11,895c	.....	.....	.....	All	Bd. Public Works.
Pueblo	.....	.....	.....	.....	1,850	.....	.....	.....	.....	.....	.....	.....
Connecticut:												
So. Norwalk	.....	.....	.....	3,400c	11,000c	.....	.....	.....	1.0	1,200	None	Common Council.
Georgia:												
Macon	.....	685	48,753	.....	7,143	.....	.....	.....	.....	.....	.....	.....
Illinois:												
Aurora	43,580c	.....	14,600c	.....	.....	.....	.....	.....	.....	.....	About 85 per cent.	Bd. of Local Improvements.
Chicago	40.3	3.2	23.1	7.4	3.4	.....	6.2	7.8	.....	.....	About 85 per cent.	Bd. of Local Improvements.
Marion	.....	.....	48,177c	.....	.....	.....	.....	838c	.....	.....	All, but st. intersections.	Bd. of Local Improvements.
Monmouth	.....	.....	42,700	.....	.....	.....	.....	.....	.....	.....	All	Bd. of Local Improvements.
Indiana:												
Mishawaka	2,291c	.....	19,002c	.....	.....	21,320c	.....	.....	.....	.....	All, but st. intersections.	Resident freeholders.
Iowa:												
Burlington	.....	.....	.....	.....	9,400c	.....	.....	.....	.....	.....	All	City Council.
Waterloo	11,362	.....	.....	.....	1,300	.....	.....	.....	.....	.....	.....	.....
Kansas:												
Fort Scott	.....	.....	39,530c	.....	.....	.....	.....	15,652c	.....	.....	About two-thirds.	City Council.
Kentucky:												
Paris	.....	.....	.....	.....	.....	.....	.....	0.5m	.....	.....	None	City Council.
Maine:												
Auburn	.....	.....	.....	.....	4,500c	.....	2,333m	.....	.....	.....	None	Comm. of streets & sewers.
Gardner	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	None	Bd. of Public Works.
Lewiston	.....	.....	.....	.....	.....	.....	.....	12,000m	.....	.....	None	Bd. of Public Works.
Maryland:												
Cambridge	.....	.....	1.4	.....	.....	.....	.....	.....	.....	15.0	Two-thirds	.....
Massachusetts:												
Easthampton	.....	.....	.....	.....	.....	.....	.....	1,770m	.....	.....	None	Town meeting.
Michigan:												
Battle Creek	.....	.....	18,859m	.....	.....	.....	.....	.....	.....	.....	1/2, except st. intersections.	Common Council.
Minnesota:												
Crookston	.....	.....	.....	29,184c	715c	.....	.....	.....	.....	.....	All, but st. intersections.	Property owners.
Owatonna	.....	.....	.....	18,038c	.....	.....	.....	.....	.....	.....	All	City Council.
Rochester	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	All	Property owners.
Montana:												
Helena	.....	550c	9,250c	6,166c	1,070c	29,670c	.....	36,450c	3,000c	.....	All	Property owners.
Missoula	.....	.....	40,000c	.....	4,428c	.....	.....	6,259c	.....	.....	All, including intersections	Property owners.
Nebraska:												
Lincoln	.....	.....	0.5c	.....	0.1c	.....	.....	.....	.....	.....	All	Property owners.
Norfolk	3.9c	.....	.....	.....	.....	.....	.....	.....	.....	.....	All, but st. intersections.	Property owners.
New Jersey:												
Atlantic City	14,245c	.....	.....	.....	.....	.....	.....	.....	12,256c	.....	Comm. appointed by Supreme Court.	Commission.
New York:												
Auburn	7,208c	1,644c	31,373c	.....	.....	.....	.....	45,533m	.....	.....	One-half	Common Council.
Buffalo	.....	282c	34,930c	.....	.....	.....	.....	.....	.....	.....	All; % of repaving.	Property owners' petition.
Bor. of Manhattan	32,112c	.....	.....	.....	.....	.....	.....	.....	.....	.....	Com. of P. W., Consult. Engineer and Chr. Eng.	.....
Plattsburg	39,258c	.....	.....	.....	.....	.....	.....	.....	.....	.....	None	Board of Public Works.

CITY.	Sheet asphalt. block.	Asphalt. block.	Granite, sandstone or other stone block.	Brick or clay block.	Creosoted wood block.	Concrete.	Bitu. lithic.	(Bituminous) Con-crete.	Macadam.	Plain or water-bound macadam.	Gravel.	Other kinds.	Proportion of pavement assessed on property owner.	Kind of pavement determined by
Ohio:														
Fostoria	.....	.....	.....	39,000	.....	.....	.....	.....	.....	.....	.....	.....	1/2, not incl. intersections...	Property owners.
Oklahoma:														
Bartlesville	.....	.....	.....	1.8	.....	.....	3.25	.....	0.6	.....	.....	.....	All	Property owners.
Chickasha	.....	.....	.....	37,000	.....	.....	.....	.....	.....	.....	.....	.....	All, including intersections.	Property owners.
El Reno	.....	147,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	All	City Engineer.
Pennsylvania:														
Allentown	.....	.....	.....	3,530c	.....	.....	.....	.....	.....	.....	.....	.....	All, but st. intersections.	City Council.
Carry	26,253c	.....	.....	3,350c	.....	.....	.....	.....	.....	.....	.....	.....	Two-thirds	Owners or Highway Dept.
Easton	.....	.....	.....	3,567c	.....	.....	.....	.....	.....	.....	.....	.....	All, but st. intersections.	City Council.
Sharpville	.....	.....	.....	1,475c	.....	.....	.....	.....	.....	.....	.....	.....	Two-thirds	City Council.
Rhode Island:														
Providence	21,450c	.....	53,093m	.....	550c	.....	16,422c	18,341m	68,713m	37,203m	.....	.....	None	Comr. of Pub. Works.
South Dakota:														
Lead	.....	.....	.....	0.75z	.....	.....	.....	.....	.....	0.75	.....	.....	All, but st. intersections.	City Engr. & Comr.
Sioux Falls	.....	.....	65,000c	.....	.....	.....	.....	.....	.....	.....	.....	.....	All	City Council.
Texas:														
Fort Worth	92,966c	.....	.....	66,241c	.....	22,635c	77,529c	.....	17,766c	.....	.....	.....	All, but st. intersections.	Commissioners.
Laredo	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	None	Street Commissioner.
Washington:														
Spokane	16,752	1,378	.....	12,780	.....	1,192	.....	26,878	35,959	.....	.....	.....	All	City Council.
Wisconsin:														
West Allis	16,214c	.....	.....	.....	.....	.....	.....	36,276c	.....	.....	.....	.....	All, but st. intersections.	Council.
Wyoming:														
Sheridan	.....	.....	.....	.....	68,000c	.....	.....	.....	.....	.....	.....	.....	All	City Council.
Canada:														
Toronto, Ont.	148,621	13,580	.....	25,971	3,243y	14,193	89,215	.....	2,780	4,953	.....	.....	All, but st. intersections.	.....

c—By contract. m—By municipality. y—2,357 cubic yards of this are untreated cedar block. z—Includes resurfacing.

ADDITIONAL PAVING NOTES.

We publish this week data concerning street paving done during 1912 which were received after the preparation of the tables which appeared in the March 6th number. Additions to the other tables will be published later.

We have also received from the Denny-Renton Clay and Coal Company the following figures of brick pavements laid in several cities of Oregon, Montana and Washington during the year 1912.

Brick paving was laid in Oregon cities in 1912 as follows: Portland, 44,876 square yards; Albany, 3,233; Eugene, 5,950; Forest Grove, 1,330; Hillsboro, 2,368; Junction City, 515; McMinnville, 802; Newberg, 3,330; Salem, 2,317.

In Missoula, Mont., 40,508 square yards were laid. In the State of Washington the following amounts were laid: Seattle, 103,805; Tacoma, 30,200; Spokane, 26,446; Mt. Vernon, 11,982; Olympia, 11,727; Georgetown, 9,750; Renton, 7,454; Stanwood, 7,446; Bellingham, 1,630; Aberdeen, 1,160; Pullman, 900; Monroe, 133.

PITTSBURGH SLOW SAND FILTERS

Reduction in Operating Costs, Largely Due to Improved Method of Handling Sand.—Treatment Preliminary to Filtering.

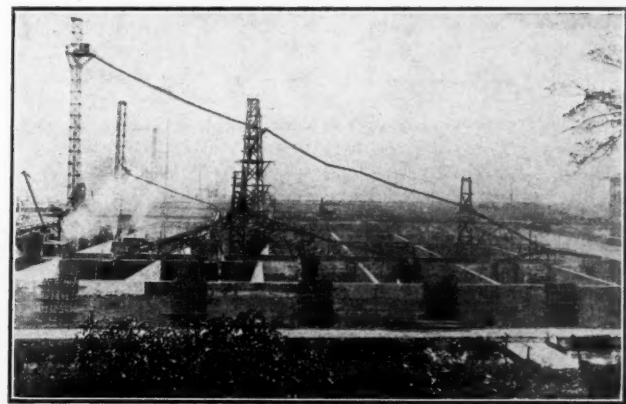
In July, 1910, George A. Johnson, consulting engineer of New York, was engaged by Mayor W. A. Magee, of Pittsburgh, Pa., to make an investigation of certain features of construction and existing methods of operation of the slow sand water filtration works completed by that city in 1908 at a total cost of some \$6,000,000. R. S. Weston of Boston was associated with Mr. Johnson on studies relating to the chemical phases of the problem.

The practical results of Mr. Johnson's investigation are set forth in the last annual report of Chas. A. Finley, superintendent of the Water Bureau. Abstracts from Mr. Finley's report follow:

It is noted with satisfaction that the total operating and maintenance charge for the year is almost \$50,000 less than the cost of last year's operations. The total for the last year was \$818,626.12; for the previous year, \$868,141.07. Most of this saving is due to the improved methods of operating the filtration plant, the saving in operation at this plant during the last year being about \$40,000.

The operation of the filtration plant for the past year has been attended with gratifying results from a financial and sanitary point of view, due to the fact that, with the improved methods of sand handling instituted last year we were able to operate the plant about \$40,000 cheaper than the cost of operating by the methods previously employed.

It appeared, from an examination of the records, that the operating cost of our plant was unnecessarily high. It also appeared that, at certain seasons, we got unusually small yields from filters between cleanings.



PRELIMINARY TREATMENT TANKS, PITTSBURGH.
24 Contact Baffles or "Reislers," 40x60 feet square, containing filter gravel. 2 "A" Frame Baffles.

The question thus naturally divided itself along two lines.

1st. A study of the actual operating conditions within the filters, such as methods employed for sand handling, etc.
2nd. A study of the physical and chemical properties of the river water, for the purpose of devising methods of eliminating from the river water the causes of the excessive clogging prior to its application to the sand filters.

The first question has been handled and investigated by Mr. Johnson.

The second question has been handled and investigated by Mr. Johnson and Mr. Weston, acting in conjunction.

These investigations began in July, 1910, and extended over about eighteen months' time, to January, 1912.

The principal changes in operating conditions within the filters were the introduction of the process of "raking" the filters between "scrapings," thereby securing additional yields from the filters at less expense than by continuous scraping, and a change in the process of restoring sand from restoring by machine to restoring from open hose lines under water.

The study of the physical and chemical properties of the river water was of necessity complicated and protracted, due to wide variation in the character of the water on account of seasonal and other changes. The investigations were continued until all the different types of water had been encountered, a large amount of data compiled, careful study made thereof, and conclusions drawn therefrom.

In line with the conclusions, a system for the preliminary treatment of the river water was designed and the necessary contract plans prepared for the construction of the same.

The result of these investigations indicates that the daily capacity of the plant can be increased from one hundred and twenty-five million gallons to two hundred million gallons without the construction of additional sand filters. The amount of water yielded by a filter between cleanings is an essential factor in the increased capacity of the plant. The prime object of preliminary treatment is the assurance of the necessary yield between cleanings. With this yield assured, the rate of filtration, or the amount of water filtered daily through each filter, can be increased so as to produce a total daily yield of two hundred million gallons, and still maintain the economy of operations in sand handling.

To arrive at this total daily capacity by slow sand filters without preliminary treatment, under the present conditions, would require the construction of about thirty additional slow sand filters of one acre each. The approximate cost of this installation would be over two million dollars, not including the necessary land.

The annual saving in sand handling alone is \$40,000, with the plant as it now stands, and if we consider the difference in cost between the extension of the present sand filters, without preliminary treatment, and the introduction of preliminary treatment, without extending the sand filters, as developed by the investigation, said difference being, in round numbers, about \$1,600,000, exclusive of land, and allow 5 per cent. annually on this saving, it amounts to \$80,000, which, with the \$40,000 saved in operations, makes a total of \$120,000.

The recent work at the filtration plant includes repairs to gallery No. 5, which have been completed at a cost of \$140,000; baffle system, basin No. 3, now under construction, to cost \$160,000; baffle system, basin No. 1, to cost \$180,000, and a chemical house to cost \$60,000, funds for both of which have been provided.

Before the installation of the water filtration works, Pittsburgh had a typhoid fever death rate of practically double that of any other large American city. The first filter unit was started in December, 1907. All of peninsular Pittsburgh was receiving filtered water exclusively in October, 1908, and all of the south side, except the 20th ward, in February, 1909. The present typhoid fever death rate in the filtered water district shows that the purified water supply may well be included among the very safest supplies of the world.

The following table, showing typhoid fever statistics in certain important American cities, shows what the Pittsburgh filtration works, under skilled supervision and with the final filtered product sterilized with hypochlorite of lime, has done in the line of cutting the typhoid fever death rate to a practical minimum. The results achieved at Pittsburgh in this line are by far the most gratifying and spectacular ever noted in the history of water purification in this country.

Typhoid Fever Death Rate in Certain American Cities.
(Death rate per 100,000 population.)

City	1906	1907	1908	1909	1910	1911	Supply, Filtered or
Albany	20	20	11	19	15	15	Unfiltered
Atlanta	50	64	47	44	43	56	Filtered
Baltimore	34	41	31	23	41	26	Filtered
Boston	22	10	26	14	11	9	Unfiltered
Buffalo	24	29	21	23	20	25	Unfiltered
Chicago	18	18	15	12	14	10	Unfiltered
Cincinnati	71	46	19	13	6	11	Filtered
Cleveland	20	19	13	12	19	14	Unfiltered
Denver	68	67	58	24	30	18	Unfiltered
Indianapolis	39	29	26	22	31	23	Filtered
Kansas City	38	40	35	23	38	24	Unfiltered
Milwaukee	31	26	17	21	45	19	Unfiltered
Minneapolis	33	26	18	20	58	11	Unfiltered
Nashville	65	85	62	53	48	..	Unfiltered
New Orleans	30	56	31	25	28	25	Filtered
New York	15	17	12	12	12	10	Unfiltered
Omaha	28	24	22	31	75	18	Unfiltered
Philadelphia	74	60	36	22	17	13	Filtered
Richmond	44	41	50	24	22	18	Unfiltered
Washington	52	36	39	33	23	20	Filtered
*Pittsburgh	141	135	53	13	12	10	Filtered

*Filtered water district. Includes 410,000 of a total of 545,000 inhabitants of Pittsburgh.

MUNICIPAL HOME RULE FOR NEW YORK CITIES.

A bill was passed by the legislature of New York State and signed by the Governor last week which is intended to give a greater measure of home rule to the municipalities of that state and make it unnecessary for them to appeal to the legislature for permission to perform every simple act which is not specifically authorized by their charters. This bill has been prepared under the supervision of the Municipal Government Association of New York State and has been strongly endorsed by the Citizen's Union and the Conference of Mayors of New York State; and although there seems to be a little question as to its exact effect upon New York City and certain other cities in a few details, it appears to be quite generally welcomed throughout the state. Heretofore, cities have had to ask the legislature for permission to sell clinker from their refuse disposal plants, borrow money to purchase automobile fire apparatus, and have even had to ask permission to receive gifts. The general hypothesis was that cities had no rights or powers except those specifically conferred upon them by the legislature.

By the new law a city can decide for itself whether it will take property offered as gifts, establish and operate municipal lighting plants, markets, warehouses, etc. It can also establish pension systems, appoint investigating committees, etc. Such of these new powers as are not already specifically conferred on some branch of the city government by the city charter, are to be assigned to certain boards or departments by the city council, board of aldermen, or corresponding legislative body of the city. The new law does not take away from any city department any power or jurisdiction which it now has, but it is hoped that it will improve conditions where departments are limited in their jurisdiction. It does not supersede any general law of the state, but it is specifically provided that no power now vested in any city is to be affected by any limitations of this act. In preparing this bill, which occupied about nine months, the charters of all the large and many of the smaller cities of the state were studied, as well as the general municipal law, the general city law, the second-class cities law and the Illinois incorporation act (which last is considered a model by some persons).

NEWS of the MUNICIPALITIES

ROADS AND PAVEMENTS

To Build State Highway from Caledonia to Avon.

Caledonia, N. Y.—Falk & Menzies, of Buffalo, who have the contract for the construction of the improved state road between Caledonia and the village of Avon, have commenced work. They have erected a building 30x40 on the state road, one mile south of the village, to house the laborers.

Floods Prove Value of Good Roads.

Dayton, O.—That the well constructed State road leading into Dayton proved a Godsend to the people of that community was one of the statements made by Chief of Police Mulhollen of Johnston, Pa., who with Common Councilman Thomas R. Parfitt, of the Thirteenth Ward, visited the flood-stricken region.

"It was not uncommon," said Chief Mulhollen, "to see those trucks, loaded with almost as much stuff as a box car, rolling rapidly down the road towards the stricken city. They would make that run of 55 miles from Cincinnati in a short time. With the railroads out, the value of good roads and the automobile was demonstrated."

Street Paving Commenced.

Lynn, Mass.—Commissioner of Streets George H. McPhetres has announced that paving on Sea street will begin soon. The paving will start at Pleasant street and will continue at as rapid a rate as possible to Commercial street, at the point at which the State road begins. There is probably no other street in Lynn upon which there is such heavy traffic, both during the week and on Sunday, when pleasure autos use the road exclusively. The presence of many coal wharves along the line prohibits the use of any but the most substantial material for the work, but Commissioner McPhetres has every confidence that his granite blocks will prove satisfactory, both as regards comfort and wear. Work has already started and is progressing rapidly on Western avenue, where smooth paving will be used, and Summer street, which has been completed, as far as the railroad is concerned, is also to come in for its share. The work on all of these streets, however, will not interfere with work on Sea street, which is given out as the most important job of the season for the street department.

Progress of Street Regrading in Pittsburg.

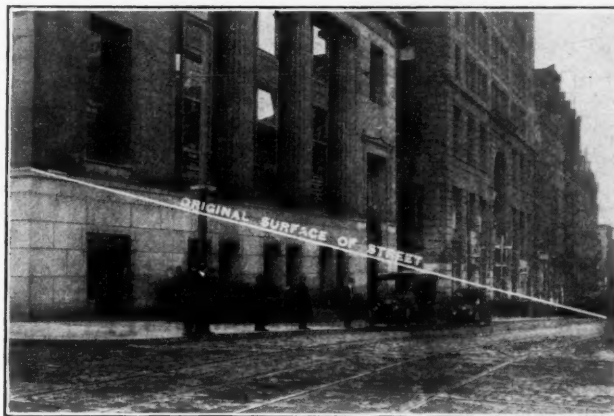
Pittsburg, Pa.—The cutting away of the Hump on Grant street has been practically finished with the exception of



Courtesy Pittsburgh Dispatch.

CUTTING AWAY GRANT STREET GRADE.

the avenue wide portion at the intersection of South avenue and Grant street as shown by the accompanying illustration. On the far north side of this ridge, which has been left to carry over the street cars until such time as they shall be re-routed, down to Seventh avenue, Grant



FIFTH AVENUE AFTER COMPLETION OF GRADE.

street has been cut down to its new grade. On the south side of the ridge, the side from which this photograph was taken, Grant street is cut away almost to Fourth avenue, and a good part of the street has already been newly paved.

An illustration of the change of grade on Fifth avenue between Grant and Smithfield streets is shown in the second picture. The white sloping line running from the Frick Building represents the line of the street surface before the cutting of the Hump was commenced.

Miles of New Sidewalks Built.

Eunice, La.—New concrete sidewalks and curbing are now the feature of the town. Last September Mayor Wyble and the Town Council entered into a contract with DeJersey & Barnard, of Jeanerette, to build concrete walks and curbing on both sides of Second street, which runs from the Frisco depot one mile south to Maple avenue, in the south part of town, and on both sides of Park avenue, one-half mile from First street to Seventh street. Park avenue is 150 feet wide, with a belt of trees set along the center of the avenue, and is really the boulevard of the future city. Many trees have been planted on various streets by the town and properly cared for and protected. The concrete work on Second street and Park avenue is done, three miles in length, and the work is going along on Oak avenue, Maple avenue, Fourth street, running north to the Catholic Church, and then on Seventh street, making in all over five miles of sidewalks and curbing under actual contract and fully two-thirds of the contract finished.

Expect to Complete Work by June 15.

Portland, Me.—All the State road work now in operation as well as all that is to be begun this Spring, is to be completed by June 15, according to a statement made to the Maine Automobile Association, by Hon. Parker L. Hardison, State highway commissioner. This information was given to the association in reply to a letter sent the highway commissioner expressing a hope that matters might be rushed ahead as rapidly as possible so that the Portsmouth and Portland road might be in condition for traffic by the time the tourist travel sets in.

Commissioner Hardison stated that work had already begun on the Portsmouth and Portland road and that two of the contractors were now on hand with their crews.

These are Forgone & Romano, who have the four miles stretch from Ogunquit west through Cape Neddick, and the other is the Hassam Paving Company which took over the contract of the defunct Shawmut Construction Company. This section is through the town of Wells. It is expected that the other contractors will begin work immediately as conditions are becoming favorable for cement construction.

An effort is being made by the Maine Automobile Association to have the State Highway Department increase the width of the concrete work on the Forgone and Romano contract from 10 feet to 16 feet. It is estimated that this can be done with little if any extra cost and it is believed by officers of the association that a 10 foot road, with dry macadam shoulders will not work out to the best advantage. Commissioner Hardison also announced that he was to start some new work and he has advertised for bids for a three and one-half mile section beginning from the present macadam road in Kittery and extending into the town of York. When this and the other contracts now in operation are completed there will be a magnificent concrete and macadam boulevard from the New Hampshire line at Kittery nearly to the Kennebunk town line.

Prisoners to Build Roads.

Norwich, N. Y.—At a special meeting of the Chenango County Board of Supervisors a resolution was passed concerning the employment at hard labor of jail prisoners. The resolution recommended that all prisoners who are capable of hard labor and who are committed to the Chenango County jail for imprisonment under sentence, be employed in preparing the materials for highway construction, viz: pounding stone, or repairing the highway. It was further resolved by the supervisors that a committee be appointed with full power to make contracts for highway employment of the prisoners.

Machines for Roads on Rental Plan.

Albany, N. Y.—A bill has been introduced which will give town boards authority to lease road machinery on terms which will give the towns title to the property when a certain amount is paid in rentals. It strikes from the law the limitation of \$10 a day to be paid for such machinery. Leases shall not be for a longer term than five years.

Road Improvement in Perry County.

Marion, Ala.—A report of the work done on Perry county public roads has been submitted by Engineer George Scales. From this report the engineer says the county will secure about 25 miles of sand and clay roads radiating out of Marion at an average cost of \$1,500 per mile. This does not include the state road to Borroughs ferry at Cahaba river, which is to be a gravel surface road and the Marion-Uniontown boulevard. The latter road consists of 19 miles and the appropriation of \$50,000 will build about 11 miles, leaving eight miles near the center of the boulevard not touched. The road leading west has been completed beyond the old Bellingsley place and is said to be the best in the country. The most important feature of the report refers to the upkeep of the roads and says if means of looking after same are not devised at once all the money and labor of the county will be lost.

Special Tax to Rebuild Bridges and Roads.

Springfield, O.—Auditor Pierce estimates that a minimum figure on the damage done to county bridges and roads by the flood will be \$150,000, not less and perhaps considerably more. Every bridge in the county is damaged to some extent, many of them entirely gone, and many of the rest not fit to be repaired. The county does not possess a single road which will not have to have some work done on it and many of them have had whole sections wiped out. The loss is so staggering that the emergency clause of the Smith one per cent. tax law, which permits county commissioners to levy five mills outside the limitation for the purpose of rebuilding highways washed out by freshets, will be totally inadequate to meet the present situation. A consultation was held at Columbus by Attorney General Hogan, R. M. Ditty, presi-

dent of the state tax commission, and Representative Robert Black, of Cincinnati, to consider legislation which will remove this difficulty. The matter will be further studied before action is definitely outlined.

A suggestion has been made to pass a special act which will permit county and municipal authorities to levy a special tax at once for the purpose of rebuilding bridges and culverts, replacing paving, roadbeds, restoring sewers and the like. A special set of bonds could be issued as soon as the tax was authorized.

New Paving Scheme.

Tampa, Fla.—W. H. Kendrick, appearing before the board of governors of the Board of Trade recently, advanced a plan of putting down Hillsborough's new brick paved roads which was received with such favor on the part of the governors that a resolution setting forth the advantages of such a course will be drafted and presented to the board of county commissioners at its next meeting as an expression of the Tampa Board of Trade on the subject. Mr. Kendrick advocates that instead of entirely reconstructing the county's highway system and rebuilding roads now paved with shell and rock, the county, instead, should excavate a space in the center of the road, ten feet wide and relay it with the brick to a width of nine feet. The excavation being made deep enough for the receiving of a brick would still leave a hard material under the paving that would prevent sinks and low places in the roadway. In advocating this system of reconstruction of roads, Mr. Kendrick contends that the county would have three times the mileage of brick highway than by paving as intended, from twenty-five to twenty-seven feet in width. The cost of the work would be less and an average of \$15,000 per mile would be saved.

Officials Inspect Harrisburg Pavements.

Chambersburg, Pa.—Chambersburg sent a delegation of its officials recently to Harrisburg to inspect the city streets. The party consisting of T. J. Brereton, president of Councils, S. K. Shyrook, chairman of the sewer committee of councils, Councilmen J. J. Mowery, J. H. Smith, Daniel Gilbert and William Rupert and Borough Engineer R. M. Huber were taken over the city in automobiles by Mayor Royal, City Clerk Miller, City Highway Commissioner Fritchey and City Engineer Cowden. Chambersburg is to lay about 15,000 square yards of paving this summer, and before any material is decided upon for the work, the committee which visited Harrisburg was appointed to look into street paving in other cities.

Restrict Traffic in Wet Weather.

Amelia, Va.—The Board of Supervisors in special session issued an order authorizing the posting of notices to the effect that on and after May 1 the county roads shall have the protection given them by law. When the roads are wet and soft after heavy rains or wet spells it will be unlawful to carry loads weighing over 1,000 pounds, nor shall the roads be used between April 1 and December 1 of each year for one day after the fall of such heavy rain or wet spell, except for the hauling of farm products.

Work on Syracuse Street Paving Commenced.

Syracuse, N. Y.—An unusually early start on paving contracts and other street improvements has been made this year. The Warner-Quinlan Asphalt Company will begin repairing the asphalt pavements within a few days and Commissioner Westcott has started gangs of men fixing up the brick pavements on which the guaranty has expired. One of the most important paving contracts already started is that in Milton avenue, from the west city line to Chemung street, by the C. T. Hookway Construction Company. This pavement and that in Willis avenue, from West Genesee street to the city line at the Erie canal, will be completed this year. Emerson avenue is also to be paved, which, with Milton avenue, will make a continuously paved driveway from the center of the city to west of the entrance to the Solvay Process Company's plant. The Willis

avenue pavement will complete the improvement inside the city of one of the routes to the State Fair Grounds.

The Warner-Quinlan Asphalt Company has started resurfacing James street from North Salina street to the Wieting property near the top of the hill, a distance of more than a mile. This is one of the largest and most important resurfacing jobs to be taken up this year. Guy B. Dickison will begin paving Tennyson avenue from Milton to Avery avenues. F. J. Baker will also commence the pavement in Woodland avenue and will soon begin the paving of East Borden avenue. Several other paving jobs are ready to be started, and it is believed that there will be carried on more street improvements this year than for several seasons.

Many Improvements Started in City.

Scranton, Pa.—Work has been started on the completion of the work of the Mulberry street viaduct.

Although the viaduct has been open to traffic for some time, it has not been officially accepted by the city because of the fact that the work was stopped early last Winter, when the weather conditions made it impossible for Contractor W. H. Lyons to finish the northerly approach. The fill has been completed, but it needs to be graded and paved and there is a concrete sidewalk to be put down.

The beginning of the work of the viaduct is only one of the several indications of the arrival of Spring. Director of Public Works Terwilliger states that the MacDonald Construction Company has begun its Spring repair work on the asphalt pavements in the central city. Contractor R. C. Ruthven has also begun work and several blocks on Prospect avenue will be the first to be paved.

SEWERAGE AND SANITATION

Work on Sewerage System Commenced

Carlisle, Pa.—After fourteen years of effort to obtain a sewerage system for Carlisle, ground has been broken for a \$90,000 system, to be completed in a year.

Offer to Buy City's Pumps.

Burlington, N. J.—Notified by city authorities that they must cease pouring drainage from their disposal plant into the city ditches from which it is pumped at the expense of taxpayers, the officers of the Burlington Sewerage Company have come back with a proposal to Council that the company buy or lease the city drainage station and do the pumping for its own plant and the city. The company offers to pump city drainage, up to 1,000,000,000 gallons a year, at an annual rate of \$6,000. A municipal commission has been doing the work for about \$4,000 a year, and recent estimates for a station, with modern equipment, have shown that this cost could be greatly reduced.

Corona Sewer Work Starts.

Corona, L. I.—Residents of Corona who for many years have been agitating for a sewer, are gratified to see work starting on the first section of the great sewer that is to drain Corona, Maspeth, Forest Hills and Flushing, and which, when completed, will cost in the neighborhood of \$16,000,000. The Litchfield Construction Company has charge of the work of the first section, which extends from Ditmas avenue to Fifty-first street. The construction work here will cost \$300,000. The sewer in parts will be 11 feet in diameter, and will be reinforced with concrete. The entire sewer, it is expected, will not be completed for three or four years. Considerable tunnelling will have to be done, the sewer in some sections running 90 feet underground.

City to Lay Sewers in Small Contracts.

Atlanta, Ga.—The city of Atlanta this year will inaugurate the policy of building lateral sewers in a number of small contracts, instead of letting the whole contract to one firm. The Sewer Committee of the Council has authorized the construction department to advertise for bids on this plan. It is believed the plan will enable the city to get the sewers built cheaper and quicker. W. A. Han-

sell, Jr., assistant chief of construction, says: "For years the city has awarded the sewer contract to one firm. The result was that no contractor was able to finish all of the sewers passed up during any year, but had to lap over into the next year before he got through. Another result of that plan was to bar the small contractors from bidding, because they were unable to make the heavy bond required. By the new plan we expect to get better prices and push the work faster. The contract will be divided into small contracts, each covering a certain territory. This will enable small contractors, who can handle small jobs just as well as the big contractors, to submit bids, and thus competition will be increased." Lateral sewers are laid on the assessment plan, and in 1912 the city laid, or rather passed up to be laid, something like sixty miles.

Building Sewer Plant for Helmetta.

Helmetta, N. J.—Work has been commenced by William Horn & Co. on the construction of a sewage disposal plant for this town. The expense, about \$15,000, will be borne solely by the George W. Helme Company. This system of sewerage was recommended by the State Board of Health. A committee from the Borough Council recently visited Roebbling and the local plant will be similar to the Mercer County one.

Work of Jerusalem Health Department.

Jerusalem, Palestine.—Since the work of sanitation was inaugurated in Jerusalem by Nathan Straus results have been attained in stamping out malaria through the establishment of a health department on the best American models. The department is housed in a building furnished by the Ottoman Government. The work was begun last August by making a division of the city in 30 districts and by a study of health conditions. It was found that every fifth person in Jerusalem had malarial germs in his blood. The chief causes of the malaria is reported to be the open cisterns, which had become breeding places for mosquitoes, and the open pools about the city. Pools have been filled and cisterns covered, and for the first time the mosquito plague has been checked. The health department of Jerusalem has sections on hygiene, bacteriology and a serology branch of Pasteur Institute, therapeutic division for foot and mouth diseases, and an eye dispensary. The soup kitchens that were established by Nathan Straus are meeting the needs of Jews, Mohammedans and Christians alike, and the workshops are employing several hundreds. Besides malaria the people of Palestine are subject to an infectious eye disease that causes blindness, and the dogs that are found prowling about Oriental cities cause much hydrophobia.

WATER SUPPLY

Pipe-Laying Is Commenced.

Redlands, Cal.—The laying of pipe for the municipal water system began at the corner of Sixth street and East Citrus avenue, under the direction of S. E. Kanady. Three hydrants for fire purposes will be placed in each block, one on either corner and another in the middle of the block. Joints will be laid with cement instead of lead.

Public Service Commission Orders Better Water Service.

Olympia, Wash.—South Bend and Raymond, as well as North Yakima, are to have better service from the water companies doing business there, for orders have been entered by the public service commission directing the spending of \$30,000 for improvements at South Bend and \$60,000 at Raymond, to improve the water service. These sums, together with the \$250,000 ordered spent at North Yakima and the \$3,000 directed to be expended at Toledo, make a grand total of close to \$350,000 that will have to be spent by water companies as a result of the orders of the state commission. In each and every instance the service is ordered improved, but not in one instance is an increased rate allowed. The commission says that the public is entitled to service, and that the water company must give the same. In South Bend the water company will have to rehabilitate

its plant to all intents and purposes, as well as put in 400 new meters. New street mains are ordered, as well as a new pipe line from the dam to the city and a new reservoir that will afford a ninety-pound pressure in the city districts. The Pacific Power & Light Company, which operates the city water system in North Yakima, must remedy the defects in its piping system; must discontinue the use of the pressure emergency reservoir; must construct a new concrete reservoir, and must complete the canal and flume used in connection with the system.

Big New Pump for Water Works.

Fort Smith, Ark.—The new 6,000,000-gallon Worthington pump, which will be the central figure of the enlarged pumping station, has arrived and been unloaded at the plant. It will not be installed until the work on the new pump house is further advanced. As soon as this pump is in place the 3,000,000 gallon pump, which is now in service, will be removed from its present pit and be installed in the new location. It will be used as an auxiliary and reserve pump. The new pump will be in operation about the middle of May.

Hillsboro Water Rate Cut.

Hillsboro, Texas.—At the last regular meeting of the City Council, an order was passed, effective April 1, reducing the water rate 25 per cent. if paid during the first ten days of each quarter.

Columbia's Well Stops.

Columbia, Miss.—The artesian well from which both the city of Columbia and the Columbia Ice and Power Company draw their water supply has suddenly ceased to flow on account of the filling up with sand at a great depth. The city as well as the power-house was in a quandary for a while. It seemed that the town would be in darkness for an indefinite period, as well as being without water. The problem was solved by the J. J. White Lumber Company, which has two large wells at its plant, which flow from 10,000 to 15,000 gallons a minute. Connections were made at once, the city's mains being near those of the White Lumber Company. Preparations are being made to start the old well again. In case of failure a new one will be made.

Great Daily Water Waste.

Doylestown, Pa.—Because Doylestown's charter limits the corporate indebtedness to \$35,000 the town is unable to build an additional storage reservoir at the water works, and more than 100,000 gallons of water go to waste daily.

City Would Compromise Against the State.

Oswego, N. Y.—A proposition under which the city may withdraw its claim of \$250,000 against the state for damages to power rights on the Oswego river, if it is agreed that the city will be given the entire flow of water at the proposed new high dam, for power purposes, will be submitted to the Barge Canal Board. Former Mayor John D. Higgins, who has been designated to represent the city in all matters pertaining to the development of power on the river, has been authorized by the Department of Water to submit the proposition. Mr. Higgins is now preparing a brief on the question of the city's rights to develop power on the river. This will be forwarded to the Canal Board within a few days. The proposition will be embodied in the briefs.

Great Water Waste in Orange.

Orange, N. J.—That 1,037,880 gallons of water are wasted every day in Orange and that the waste could be cut to 500,000 by the application of the right kind of remedies, was the substance of a report submitted to the New England Society of Orange by Joseph D. Holmes, chairman of the public welfare committee. Mr. Holmes's committee has been investigating the subject of water consumption and waste for nearly a year, the matter having been referred to the committee just before the summer recess of the society in 1912. The report recommended making a continuous record of the amount of water drawn from the

storage reservoir, to be made by means of a meter with a chart recorder, which would show the consumption for every hour of the day and night. The leakage in the mains and service pipes should be ascertained, he said, by means of pitometer tests. "A few thousand dollars expended in this work would be returned a hundred-fold in saving new construction and extending the life of the present source of supply." Mr. Holmes's investigations convinced him that the consumers of water in Orange use 1,297,350 gallons a day, that leakage from mains is 518,940 gallons, slip of meters accounts for 129,735 and hydrant flushing, fires, etc., use 129,735 gallons. The total amount of water delivered to the city each day averaged 2,594,700 gallons. The figures of use and waste were arrived at by applying the analysis of results in a number of cities, on a percentage basis.

Petaluma Now Owns a Water Plant.

Petaluma, Calif.—At a meeting of the stockholders of the Petaluma Power and Water Company President A. B. Hill was authorized to sell to the city its plant, located in Sonoma county, for \$335,000, plus any amount expended for permanent improvements to the plant since the 1st of February of this year. The City Council recently appointed a committee of fifteen citizens to look into the matter of purchasing the plant, which supplies water to the people of this city; but little action was taken, so the Council filed a complaint against the water company with the State Railroad Commission a few weeks ago.

Water Free of Bacteria.

Columbus, O.—The city board of health issued the following bulletin regarding the water supply in Columbus: "The board of health is assured by the bacteriologists of the state board of health, and daily tests made in the laboratory of the city board of health, that the water is safe for all purposes in all parts of the city except the West Side. Residents of the West Side should continue to boil the water until further notice from the board of health."

Sufficient Water in City Lakes.

Norfolk, Va.—At a conference between the Finance Committee of the Norfolk City Council and the Board of Control, a report was made of the very satisfactory condition in which the city lakes were found when officially inspected, and while it is felt that the water in the lakes is sufficient for all the city's present purposes, it was arranged that the Board of Control shall keep a close watch over the lakes, and at the first indication of a critical condition report to the Finance Committee. These two bodies—the Finance Committee and the Board of Control—are to contract for a temporary supply of water should one be needed, but a prominent member of the Finance Committee said that in his judgment no such contract will ever be necessary, meaning that Norfolk's present water resources will be ample till the larger contemplated supply is available. He said that the present plan to dredge the lakes, and make connections where needed will so concentrate the supply, and thus greatly reduce the surface exposure of the water, that there will be a material conservation of the present supply by lessening the loss from evaporation.

Intercommunicable Pumping System Advantageous.

Utica, N. Y.—Following several tests the big Gould centrifugal pumps at the Pleasant street reservoirs of the Consolidated Water Company have been found efficient to meet all possible demands that may arise for the supply of city water. There are three pumps at the Pleasant street pump house, near the reservoirs, two being capable of 5,000,000 gallons of water each per 24 hours, and the other taking 750,000 per 24 hours. In times of heavy rain the water company officials have found a slight inclination to roil on the part of the water in No. 4 reservoir which is the highest. It has been found by experiment that just as good pressure can be obtained by pumping from one of the lower reservoirs, and thus in times of roil in No. 4 the city will be supplied with clear water from the other reservoirs, which do not cloud up so easily. Reservoir No. 4 is also the best for fire service, and should it for any reason be depleted the pumps will be able to give the same pressure service to

the city mains if a long and hard fire broke out. It is intended that the smaller pump will be, when necessary, used for what is known as the "highest service," especially through New Hartford. The officials of the water company think that these pumps will mean much better and surer service, and this will consequently act to the betterment of the city at large and the private water consumer who likes to see his drinking fluids clear.

Water Boils Up, Flooding Town.

Bellevue, O.—The town of Bellevue, with no creek or river within several miles of its borders, is still flooded, with the waters rising, while rivers throughout the state have returned to their banks. Here and there over the flooded town the water bubbles up as though in a boiling pot. The theory is that an underground stream flows beneath the surface of Bellevue and that the stream, now flooded, is backing up through crevices in the earth's surface. Bellevue has always had a natural drainage system into this underground stream. Whenever a sewer is needed a hole is drilled into the ground until a crevice is struck from 50 to 20 feet below, and the sewer outlet established. Geologists say the underground river has its outlet at Castalia in the famous "Bluehole," an immense spring.

STREET LIGHTING AND POWER

City Emerges From Darkness.

Columbus, O.—After a week of Stygian nights, downtown Columbus has emerged from its darkness when the cluster lamp system was lighted. Energy was furnished by the municipal light plant, which has been submerged. Work of drying generators is being done, and the rest of the city will be lighted gradually. Superintendent Harry Eichorn said that several circuits on the West Side would be lighted by the end of the week.

Dalton Soon to Have New Electric Power.

Dalton, Ga.—It will be only a matter of a short time before the city will be using the Georgia Railway and Power Company's power, work of stringing the cables and completing the transformer station being rushed. The station will be an open-air one; the transformers will be installed on a concrete base, and will not be covered with a building. The station will have a capacity of 2,000 horsepower, and is said to be the largest open-air transformer station in the world.

Gas Company to Make Reduction.

Bay City, Mich.—The first ten years of the Bay City Gas Co.'s franchise having ended this month, the company will hereafter make a reduction of 5 cents a thousand cubic feet of gas as per franchise. A similar decrease will be made at the close of another 10 years, or before if the annual consumption of gas reaches 300,000,000 cubic feet. The franchise calls for a reduction of 5 cents when the yearly consumption of gas reaches 150,000,000, but Manager Ball, of the gas company, says the annual consumption has not reached that amount and the ten-year clause in the franchise now takes effect.

Electric Lights in New Augustine.

New Augustine, Fla.—Through the efforts of the Village Improvement Association the town of New Augustine is now enjoying lighted streets at night. Eleven electric lights have been secured which have been placed along King street and the Horn and Moultrie roads, with the prospect of more to extend still further out and on other side streets.

New Lighting System Will Be Ready Soon.

Newport News, Va.—The brackets for the luminous arc lights on Washington and Jefferson avenues have arrived and they are now being put in place on the new iron poles, which have been set in place on those thoroughfares. The work of installing the lamps will begin as soon as the brackets are up and the lights very probably will be ready to be turned on in a week or ten days. The work of in-

stalling the incandescent street lights to replace the arcs on the other avenues and streets of the city is going forward at a very satisfactory rate and present expectations are that the new lighting system will be completed by the middle of the month.

Reward Offered for Arson Reduces Insurance Rates.

Beeville, Tex.—Beeville has secured a reduction of 1 cent from the fire rate. This was brought about by the city offering a standing reward of \$100 for the arrest and conviction of any party guilty of arson. The rate is now 73 cents.

Police As Interpreters.

Berlin, Germany.—A dozen policemen who have finished an English course at a school of languages are to be posted along the main thoroughfares of Berlin's West End—unter Den Linden, Potsdam, Friedrichstrasse and Leipzigerstrasse—to serve as guides and interpreters to English-speaking visitors. They will be known by the crossed flags of England and America on the sleeves of their tunics. If the first twelve are successful others will be trained, and it is intended, if the results of the experiment are satisfactory, to educate police interpreters in other languages. Dresden and Leipzig already have English-speaking police.

Extinguisher Works Well.

Portsmouth, Va.—A successful test of the Pyrene fire extinguisher was held on a lot at Washington and High streets by Mr. Boykin, the district representative of the company. Chief Walker was present at the tests and was loud in his praise of the work done by the extinguisher in quickly controlling blazing gasoline, cotton waste and excelsior soaked with gasoline, also a miscellaneous pile of waste, rags and other material soaked in oil.

Test Fire Sprinklers.

Philadelphia, Pa.—Tests of sprinkler systems with steamer connections were made recently in the plant of Merchant & Evans Company, Twentieth street and Washington avenue, before a crowd of fire department officials and members of the fire prevention committee, under whose auspices the tests were conducted. While this system of outside water supply has been in use for several years in other cities, it never has been tried in Philadelphia, and it is the intention of Director Porter to issue an order that the second line of hose run at all fires is to be attached to the sprinkler system where the buildings are equipped with necessary connections. This order will be issued as soon as the firemen are familiar with the system.

The first test was made with the inferior sprinklers. Fires were made under the sprinkler head until the heat released the water. The supply was taken from the water tank, which has a pressure of 40 pounds a square inch. Then the steamer of Engine Company No. 4 was attached to the connection on the opposite side of the building and city water was pumped through the system at 100 pounds pressure. The maximum pressure which can be attained is 125 pounds. Heretofore the sprinkler systems have been supplied from a water tank. Part of the curtain sprinkler on the outside of the building was next put in use, and the same tests were made with the tank and engine supply. Great satisfaction was felt by the department officials, who declared that the system is a great aid in fighting a fire and would reduce the loss to a minimum. Acting Chief Meskill spoke in high praise of the device. He declared that by this method one hose attached to the curtain sprinkler around the outside of a burning building would do the work of several hosemen and a hose, and do it more effectively. The tests were made under the direction of J. Mallory, executive secretary of the fire prevention committee. A "flying squadron," composed of members of the fire prevention committee, will visit all of the fire houses in the city and explain the system to the men by means of drawings and blueprints.

MOTOR VEHICLES

City Buys Kissel Kars for Water Department.

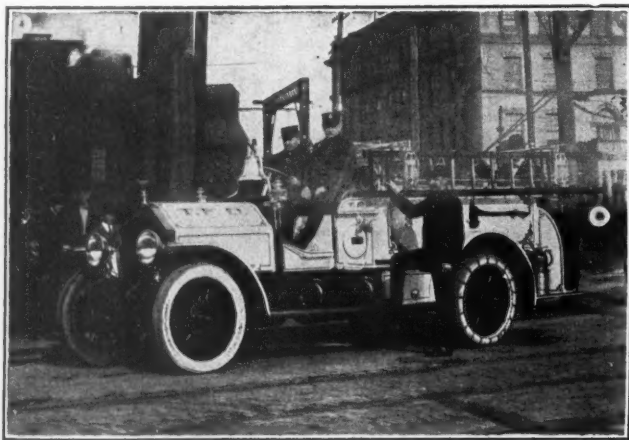
Milwaukee, Wis.—The city of Milwaukee has purchased two more Kissel Kar 1,500 pound motor wagons for the use of its water department. This makes a total of seven Kissel Kars in the municipal service of that city, four in the water department, two police patrols and a car which does runabout duty for the public library.

Mayor Commends Purchase of La France Engine.

Meadville, Pa.—Mayor F. M. Graff, in a letter to the common council, says: "I have the honor to transmit a copy of the report made to me by Chief Dowdell on the fire which destroyed the No Dust plant on the evening of March 28, 1913. It appears the new LeFrance engine was the means of saving property estimated at \$125,000, and I am hopeful that this showing will justify any misgivings which you may have had regarding the initial expenditure for this splendidly efficient machine. I take pleasure in congratulating you upon the wisdom and foresight displayed in the purchase of this fine modern equipment, and gladly use the occasion to encourage you to complete the good work by the installation of all motor equipment."

New Auto Chemical Stands Good Test.

Trenton, N. J.—The new combination hose and chemical automobile apparatus for service at No. 3 Engine Company on South Broad street, which is herewith illustrated, was tried out at the canal opposite the John A. Roebling's Sons' Company's plant on South Broad street. Chief Bennett and Assistant Chief Stackhouse tested the appliances with which the combination apparatus is equipped. In the test of the Morse turret pipe, which is attached to the side of the apparatus, fine exhibitions of water throwing was shown. Two fifty-foot lines of 2½-inch hose was siamesed into the pipe. These lines were connected to the fire engine and water was forced 150 to 175 feet in the air with scarcely a break in the stream until the maximum height was reached. For velocity, volume, height and reach the test was considered to be standard. The piezometer tests were made by Assistant Chief Stackhouse, with Chauffeur Hutchinson at the pipe. Engineer Tighe was in charge of the steamer. The Kanawha air pressure chemical system was also tried out and found satisfactory. The new combination chemical auto is the first piece of new apparatus projected for the improvement of the fire department to be placed in service. The chassis was purchased by the city commissioners from the Web Fire Apparatus Company, Allentown, Pa. The body was designed and built by the Fitzgibbon and Crisp Carriage and Wagon Company. The apparatus will carry United and Globe and Hamilton Rubber Company's hose, made after Trenton specifications and is more completely equipped than standard apparatus of the same type.

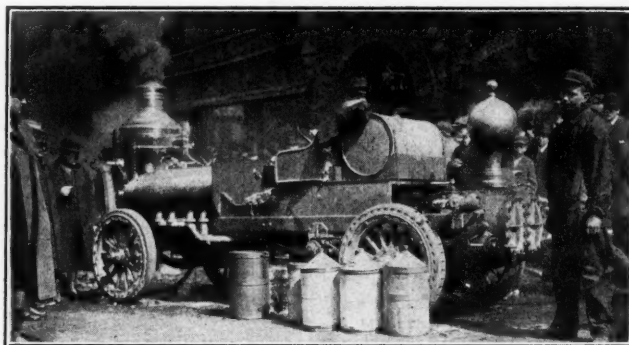


Courtesy Trenton Evening Times.

WEBB CHEMICAL AUTOMOBILE.

Motor Fire Apparatus Pumps 37 Hours Continuously.

Rochester, N. Y.—The world's record for a motor fire pump was established by the machine invented by Leonhard Fuchs of Rochester. The record was made in pumping water out of the basement of the Wilder Building, and consisted in 37 hours and 20 minutes continuous pumping without being slowed down or stopped for a single instant. The pumps were run against 110-pound pressure and lifted the water 23 feet discharging 510 gallons of



Courtesy Rochester Sunday Herald.

FUCHS AUTO ENGINE BEATING WORLD'S RECORD.

water per minute. The best previous record was made in Los Angeles by a machine made by Ahrens-Fox, the record being 18 hours and 13 minutes. The Fuchs machine, an illustration of which is given, was put in operation on Friday morning at 8 o'clock and shut off its power Saturday evening at 9.35 o'clock owing to lack of water. During the whole of that time it was in competition with a regulation fire engine, and pumped two gallons to every one of the fire engine. Mr. Fuchs left his bed in anticipation of a call at 2 o'clock on Friday morning and did not leave the engine once until after it was safely tucked away in its garage. The machine is owned by the Rochester Motor Fire Pump Company, and for some time past has been kept ready for a good chance to demonstrate its powers. It is run by a 100-horsepower eight-cylinder engine, capable of 1,400 revolutions a minute.

Police Patrol Ready May 1.

Perth Amboy, N. J.—A new Lippard-Stewart automobile patrol and ambulance has been ordered from the Frank Van Syckle garage and is expected in the city for service on or before May 1. The cost is to be \$2,500, the maximum amount for the vehicle set by the council last year, when bids were advertised for. Frank Van Syckle will also operate and maintain the vehicle under a contract with the city. He will furnish service for \$1 a call. The chassis is to be of the regular heavy Lippard-Stewart type. The body is to be especially made for the city, and is to be constructed for ambulance and patrol service, and will be brilliantly painted and highly polished.

Motor Chemical is of Great Value.

South Bend, Ind.—On April 2, 1912, a year ago, the South Bend fire department installed at the central station its first motor chemical truck. After a year of service, according to Chief Grant and those in charge of the motor chemical truck, the machine is at the present time in as good a condition as it was when it was officially put into commission. The cost of the upkeep of the motor truck, including gasoline, repairs and oil, since April 2, a year ago, has been \$117.50 according to the figures of the fire department officials. The cost of caring for two horses for this period of time equals almost three times as much as what it has cost to care for the motor truck. The fire department figures that it costs on the average of 84 cents a day to keep a team of horses. According to figures the expense of the motor truck has been 32 cents per day for the past year. The city has spent up to date \$97.03 for gasoline for the chemical; \$8.40 for lubricating oil and grease, and \$12.07 for repairs, which includes the price of one new inner tube. The chemical truck has made 265

runs during the past year, covering a distance of 604 miles. The chemical goes to all the fires whether in the central district or not. The time made in reaching the different fires is far better than can be made by horses. The cost of the chemical used by the motor truck is not included in the upkeep expense but a glance at the fire department's figures will show 6,171 gallons of fire extinguisher has been used during the past year. The firemen mix the chemical themselves and figure that the ingredients cost about two cents to the gallon, thus the chemical solution used on the new truck has cost the city since last April, \$123.42. Out of the 265 fires or runs made by the chemical during the past year 90 of these have been extinguished by the use of the chemical apparatus alone.

Abolish a Station on Acquiring Motor Equipment.

Rome, Ga.—By the addition of two automobile chemical trucks to the equipment of the Rome fire department, it has been found feasible to abolish one of the stations that has been in use for a number of years, and to consolidate same with the second station in the business part of the city. The station abandoned was at the city hall, and the room heretofore in use will be utilized for housing the automobile police patrol.

Fire Chief to Have Auto for Own Use.

Wilmington, Del.—The fire committee of city council has decided to allow the local agency of the Overland Automobile Company to present an automobile to the chief of the fire department as soon as such a machine is available. It is not to be a new one and after it is put in good shape, so far as the machinery is concerned, the city is to have it painted and equipped with a new set of tires. This the fire committee of council is willing to do as it does not feel that the city should receive the machine entirely as a gift. The Overland agency is now looking for a car suitable for the purpose and on acquiring it will be put in good shape.

GOVERNMENT AND FINANCE

Adopt Commission Government.

Millville, N. J.—At the special election the voters by a majority of two to one adopted for Millville commission government for at least six years.

Governor Signs Municipal Ownership Bill.

Lincoln, Neb.—Governor Morehead has signed the municipal ownership bill for Lincoln, enabling the city to purchase, establish and operate public utilities.

Women Win at Salina Election.

Salina, Kan.—The election at Salina was practically a fight between the men and the women for the mayoralty, the women winning out in the election of V. E. Niquette by a majority of 123. Niquette is a retired farmer and is now in the real estate business in Salina. Hundreds of women went into the booths and killed their husbands' votes, and in many instances the women worked against their husbands.

Injunction Certain if City Uses Voting Machines.

Rochester, N. Y.—Edwards, Sager & Wooster, attorneys, of New York City, have written to Mayor Edgerton on behalf of their client, the Triumph Voting Machine Company, of Pittsfield, Mass., asking that assurance be given them that the voting machines now in use in the city are not put into use. Otherwise, they state, they will sue for an injunction restraining the city from operating them and for an accounting. The letter calls attention to United States Letter Patent 1,013,679, issued on January 2, 1912, to C. H. Ocumpaugh on an application filed February 20, 1896, and assigned to the Triumph Voting Machine Company. The city of Rochester purchased from the Empire Voting Machine Company, of Rochester and Jamestown, voting machines, which, it is claimed, infringe on the patent. Suit has already been brought by the Triumph Company against the Empire Company in United States

District Court for the Western District of New York, for infringement. In the event that the city used the machines, and the suit for an injunction was brought, the court would doubtless require a bond of the company, such procedure being the usual one.

City of Orlando Plans a Commission Form of Government.

Orlando, Fla.—An organized mass meeting of citizens has adopted a simplified form of charter providing for a commission form of government for Orlando. The character is based on those already used in South Carolina, Texas and New Jersey. Same to be presented at once to city council for their approval and recommendation to the legislature, with the purpose of becoming effective at the beginning of the new year.

City Creates New Bureau.

Los Angeles, Cal.—By ordinance the council established the housing commission as a bureau of the health department, and under the supervision of Health Commissioner L. M. Powers. This ordinance, which will become effective in thirty days, provides for a housing commission of seven members, to be appointed by the health commissioner. It is provided that at least two of the commissioners shall be women. The number of employees provided for is the same as now fixed by ordinance, and the salaries therefor remain the same.

STREET CLEANING AND REFUSE DISPOSAL

Bisbees Annual Cleanup Finished.

Bisbee, Ariz.—Bisbee's annual cleanup has been completed, Sanitary Inspector Perry has announced that it will now be up to the public to maintain the present excellent sanitary conditions and that the sanitary ordinance, providing that each householder be responsible for the sanitary condition of his premises, will be rigidly enforced.

Clean-Up Week in Saratoga Springs.

Saratoga Springs, N. Y.—Saratoga Springs is to have another clean-up week this year. It will be conducted by the Women's Association, which has had the matter in charge for the past two years. An appeal will be made to the merchants and property owners to clean up about the residences until the village can be called "Saratoga the beautiful." The clean-up work will be conducted along the same lines it is in other cities. The work will be superintended by a committee of citizens, each of whom will have a certain district to look after. Miss Katherine Yewens is chairman of the committee.

Gardeners Want Crematory Ash.

Spokane, Wash.—City Crematory Superintendent Arthur E. Peterson is conducting a brisk business in crematory ashes, formerly a waste product, but discovered by Mr. Peterson to be a valuable fertilizer. In 100-pound sacks or by the ton, large quantities of the ash are being sold to gardeners in Spokane and vicinity and residents who want to renew their lawns. In regard to value of the ash as fertilizer and how to use it, Mr. Peterson has issued the following bulletin: "The ash contains about 18 per cent. air-slacked lime, 7 per cent. phosphoric acid, of which approximately 3 per cent is soluble in water, and less than 1 per cent. potash. These elements constitute the valuable portion of the ash. The balance of the ash consists of silica, iron, magnesium and moisture. None of these latter elements are in such quantity as to retard plant growth nor are they detrimental to plant growth in any way.

Appropriation for City Spring Cleaning.

New York, N. Y.—The Finance Committee of the Board of Aldermen reported favorably on the request of Health Commissioner Lederle for \$37.00 to be used in giving the city a spring cleaning, and also for \$66.00 for use in fighting mosquitos this summer in Queens, Brooklyn and Richmond. The aldermen will pass upon the appropriation and

it is expected that they will be granted, as Tammany Leader Frank Dowling announced that he was in favor of both requests. "This matter of clearing away rubbish is an important one," said Mr. Lederle before the committee, "and I certainly hope that an appropriation will be made. We are all ready to begin as soon as we get the necessary money." If the aldermen pass the bills they will have to be approved by the Mayor and the Board of Estimate, so it may be another month before the work begins.

Sprinkle Streets With Salt Water.

Norfolk, Va.—The Board of Control has arranged to use salt water for sprinkling the streets and has notified the department of street cleaning and the Virginia Railway & Power Company that a salt water plant and hydrant has been installed at Boush and Main streets.

RAPID TRANSIT

Detroit Votes for Municipally Owned Trolleys.

Detroit, Mich.—With only eight precincts out of a total of 177 missing the municipal ownership amendment to the city charter, providing for a city owned street railway system, had carried by a vote of about four and one-half to one. The figures showed:

For municipal ownership.....	36,864
Against	8,451

MISCELLANEOUS

Authorizes City to Deal in Ice.

Albany, N. Y.—Progressive members of the Legislature have prepared a bill under which New York City would be empowered to proceed, by purchase or by manufacture, to acquire a supply of marketable ice, and then sell it at a reasonable price, based upon the cost. The Progressive legislators say that if the bill is not passed they will make "municipal ice" an issue in this year's campaign in New York City.

Sharp Hatpins Must Go.

Trenton, N. J.—Assemblyman Kirkpatrick's bill preventing the wearing of hatpins with unguarded points has been signed by Governor Fielder and is now a law. It takes effect immediately. It is a supplement to the act entitled, "An act concerning disorderly persons." The measure makes it unlawful for any person to wear in any public place any device attached to his or her head, hair, head-gear or hat, which device is capable of lacerating the flesh of any other person, unless the point is sufficiently guarded against the possibility of such laceration. It further provides that any person who shall violate its provisions shall be deemed a disorderly person and upon conviction shall pay a fine of from \$5 to \$20 for each offense, one-half of which shall be paid to the person making the complaint.

Municipal Magazine to Be Issued April 15.

Lexington, Ky.—Mayor's Clerk Ben L. May is working hard on the first copy of the new Municipal Magazine, which is to make its appearance on or about April 15. The municipal magazine, besides having an attractive cover, will contain desirable information about Lexington and its future. A digest of municipal information for ready reference will be presented. Lexington's public parks, playgrounds and future civic development along these lines will be given a chapter in the magazine.

Will Beautify River Banks in Heart of City.

Spokane, Wash.—A comprehensive plan for the beautification of the Spokane River within the city limits is being worked out by the City Park Commission. The Park Commission, through its president, A. L. White, has prepared extensive plans for improving the river east of Mission avenue and west of Monroe street, but the intermediate section in the heart of the city has hitherto been unprovided for. In order to beautify the islands in the river

channel, particularly in the vicinity of Post, Howard and Washington streets, where thousands of passengers on the Great Northern, O.-W. R. & N. and Spokane & Inland trains get their first impression of the city, President White will have a meeting of representatives of these companies, who will plan a parking system.

Plaza for League Island Park.

Philadelphia, Pa.—In the revised plans drafted by Olmstead Brothers, of Boston, who were specially engaged by the city for the purpose of constructing the plaza at Oregon avenue, constituting the entrance to the Southern boulevard, which traverses League Island Park to the Philadelphia Navy Yard, advantage has been taken of every inch of space in the four city blocks which the plaza will cover to make of it an artistic center.

As shown by the accompanying cut, Broad street is continued through the center of the plaza to the Southern boulevard, while east and west it is bisected by Johnston



PARK PLANNED BY OLMSTEAD BROTHERS.

street. The architects plan an oval at the intersection of these streets, with a monument in the center and statuary in the avenues at either side.

The oval again is the focal point of a square of terraces, rising some three feet or more above the street grade, with diagonal walks and settings for further monuments or statues at each angle of the square, which will be bounded by rows of shrubbery and terraces.

Under a contract let to Daniel S. Bader for \$124,000 the work of grading the plaza will be finished next fall, while through the winter and next spring the work of the actual surface developments will be started and be finished by the middle of the summer of 1914, under the same contract.

Costly Improvements Under Way at Somerset.

Somerset, Ky.—That Somerset is growing and prosperous is evidenced by the amount of building and improvements that are going on and are contemplated. A \$75,000 government building is being built; a light and power plant that are undergoing reconstruction at a cost of \$75,000; a new filter plant is being built to furnish at all times clear water; a new depot at a cost of \$35,000; prospective city hall to cost \$25,000, and sewerage system to cost \$150,000.

"Safety Day" Observed in New York.

New York, N. Y.—On April 4 New York City had its first safety day. This is a day on which the 10,000 teachers in the public schools read to the 850,000 pupils a lecture on safety, caution, the necessity of looking out for themselves and others all the time. The Board of Education, co-operating with the American Museum of Safety, made possible the plan, which is to be an annual feature of the school curriculum.

LEGAL NEWS

A Summary and Notes of Recent Decisions— Rulings of Interest to Municipalities

Personal Injuries—Amount of Damages.

Perry v. City of Sedalia.—Where the evidence of a pedestrian, suing for injuries on a defective sidewalk, showed that she sustained a severe and painful injury to her ankle, accompanied by a nervous shock, and that she had not recovered at the time of the trial, and the extent of her injuries and their effect on her were contested, a verdict for \$750 would not be disturbed as excessive.—Kansas City Court of Appeals, Missouri, 153 S. W. R., 537.

Bonds—Elections—Form of Ballot.

Realty Inv. Co. v. City of Mobile.—Const. 1901 provides that the ballot used at an election to determine whether municipal bonds shall be issued shall contain the words "for.....bond issue" and "against.....bond issue" (the character of the bonds to be shown in the blank space) and the voter shall indicate his choice by placing a cross mark before or after the one or the other." The ballot used in a bond election was headed "Official ballot of the election to be held on September 2, 1912, to submit * * * whether or not the city of Mobile shall issue" sewer bonds in the amount stated, and immediately beneath was the proposition, "Proposed bond issue of bonds of city of Mobile, to be sold for the purpose of extending its sanitary sewer system," describing the bonds as to interest, etc., which proposition was inclosed on the left by a brace and to the left of the brace near the top of the proposition was "[] For," and somewhat below and also at the left of the braced proposition "[] Against." Held, that the ballots substantially complied with the constitutional form and were sufficient; a substantial compliance only being required.—Supreme Court of Alabama, 61 S. R., 248.

Police Courts—Jurisdiction—Real Property.

City of Richmond et al. v. Sutherland.—Code 1904, as amended by Act March 16, 1910, providing that police justices shall have original jurisdiction for the trial of "all offenses of whatever nature," against the ordinances of their cities, "expressly," or in "express terms," within the rule that a justice of the peace or police justice who is acting under a statute can only exercise such jurisdiction as is expressly conferred on him, confers jurisdiction upon police justices to try offenses against city ordinances, although there is involved a bona fide claim of title to real estate.—Supreme Court of Appeals of Virginia, 77 S. R., 470.

Sinking Fund—Ordinance—Validity.

Loudenslager v. Atlantic City et al.—An ordinance of Atlantic City rescinding a resolution of 1896, establishing a sinking fund under Act 1879, entitled "An act to enable cities to create and maintain a sinking fund for the redemption of their bonded indebtedness," and under which the Supreme Court justice on application appoints the commissioner of the sinking fund, was ultra vires, and not authorized by Act 1881, p. 189, entitled "An act authorizing the establishment of sinking funds in cities of this state"; this latter statute not operating to repeal or supersede the act of 1879, and applying only to cities which had not previously taken advantage of the act of 1879.—Supreme Court of New Jersey, 86 A. R., 51.

Sewer Outlet—Injury to Personality.

Scranton & Lehigh Coal Co. v. City of New York.—Plaintiff, a coal merchant, with canal wharfage rights, claimed that the discharge of sewers by defendant city into the canal impeded navigation to and from plaintiff's premises so as to be a nuisance, and the complaint alleged that, by reason of the premises and defendant's neglect to remove the obstruction in the canal caused by the dis-

charge of its sewers therein, plaintiff was greatly hampered and delayed in the navigation of coal barges containing its supplies of coal and in their unloading, was put to great expense in bringing the coal barges to its wharf and unloading them, by being compelled to employ extra labor and machinery, and to pay demurrage and wharfage. Held, that the complaint did not allege any injury to personality so as to authorize an action against the city under Greater New York Charter the allegation as to the payment of charges, etc., merely explaining the manner of the impairment of the ordinary use of plaintiff's premises, and being evidentiary in character. New York Supreme Court, 140 N. Y. S., 332.

Handbills Wrapped in Newspapers—Ordinances.

People v. Horowitz.—A municipal ordinance, providing that no person shall throw, cast, or distribute upon any street any handbill, circular, or other advertising matter, is violated by the distribution of such matter, although inclosed in a container, envelope, or wrapper, and hence was violated by inclosing such matter in newspapers sold on the street by accused.—City Magistrate's Court of New York City, 140 N. Y. S., 437.

Street Opening—Assessment of Benefits by Court.

Manners v. City of Waterbury.—Where a property owner voluntarily appealed to the superior court from an assessment of benefits from a street opening, which was void for lack of notice, the court could determine whether his land was benefited and make the assessment, since an opportunity to be heard, whether before the original assessing board or on appeal, is all that is required.—Supreme Court of Errors of Connecticut, 86 A. R., 14.

Defective Sidewalk—Water Meter.

City of Atlanta v. Hampton.—Where, in a suit for a physical injury, it was alleged that the plaintiff was hurt by stepping on a defective cap of a water meter on a sidewalk of the defendant municipality, it furnishes no ground for a new trial that the court, in charging in reference to the duty of a municipality in regard to keeping its sidewalks in reasonably safe condition for use by the public, referred to this duty as one in regard to its "streets" and sidewalks. Especially is this true where the court also instructed the jury that the plaintiff must recover, if at all, on the case as alleged.—Supreme Court of Georgia, 77 S. R., 393.

Consulting Engineer—Compensation.

Town of Woodville v. Jenks.—In a suit by a supervising and advising engineer for compensation of 5 per cent. for installing a waterworks system, he was entitled to such compensation where the failure of the pump guaranteed by such engineer to be sufficient to do the work was occasioned by the town's own fault, even though the town had removed such pump, and installed another without his help.—Supreme Court of Mississippi, 61 S. R., 172.

Injuries to Pedestrians—Negligence of Fire Department.

Martin v. Board of Fire Com'rs for City of New Orleans.—Where the employees of a fire department of a city needlessly hitch to an engine a pair of untrained horses, and attempt to drive through the streets of the city, and, through some cause or other, these horses go upon a sidewalk with the engine and injure a pedestrian, who has an undoubted right to be upon the sidewalk, the injured person has a cause of action for his injuries.—Supreme Court of Louisiana, 61 S. R., 198.

Street Railroads—Franchise—Validity.

City of Denver et al v. Mercantile Trust Co., of New York.—A grant by a city to a street railroad company of the right generally to construct its lines on any of the streets of the city as it may desire from time to time, without any limit as to time, is unreasonable and invalid in the absence of express legislative authority; but such provision does not render the grant void as to streets which are actually occupied or were at the time in contemplation of occupancy in the immediate future.—United States Circuit Court of Appeals, 201 F. R., 790.

NEWS OF THE SOCIETIES

Calendar of Meetings.

April 24-25.
NATIONAL GOOD ROADS FEDERATION.—Annual meeting, Birmingham, Ala. J. A. Rountree, Secretary, Birmingham, Ala.

April 24-26.
IOWA STREET AND INTERURBAN RAILWAY ASSOCIATION. Annual Convention, Waterloo, Ia. H. E. Weeks, Secretary, Davenport, Ia.

April 28-May 3.
JERSEY CITY MUNICIPAL EXHIBIT.—Fourth Regiment Armory, Jersey City, N. J.—Address Municipal Exhibit, Room 6, City Hall, Jersey City.

May 5-7.
NATIONAL CONFERENCE ON CITY PLANNING.—Annual Meeting, Chicago, Ill. Flavel Shurtleff, Secretary, 16 Congress Stret, Boston, Mass.

May 6-8.
GAS, ELECTRIC AND STREET RAILWAY ASSOCIATION OF OKLAHOMA.—Annual Convention, Oklahoma City, Okla. H. V. Bozell, Secretary, Norman, Okla.

May 6-10.
PLAYGROUND AND RECREATION ASSOCIATION OF AMERICA.—Annual Meeting, Richmond, Va.—H. S. Braucher, Secretary, 1 Madison Ave., New York City.

May 12-14.
SOUTHWESTERN WATER WORKS ASSOCIATION.—Second Annual Convention, Fort Worth, Tex. E. L. Fulkerson, Secretary.

May 20-23.
AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Spring Meeting, Baltimore, Md. C. W. Rice, Secretary, 29 West 39th street, New York City.

June 5-7.
CONFERENCE OF MAYORS OF NEW YORK STATE.—Meeting, Binghamton, N. Y. William P. Capes, Secretary, 105 East 22d Street, New York City.

June 23-28.
INTERNATIONAL ROADS CONGRESS.—Third Congress, London, England. W. Rees, Jeffreys Secretary, Queen Anne's Chambers, Broadway, Westminster, London, S. W.

June 23-28.
AMERICAN WATER WORKS ASSOCIATION. Thirty-third Annual Meeting, Minneapolis, Minn. John M. Diven, Secretary, 47 State street, Troy, N. Y.

June 24-26.
UNION OF TEXAS CHIEFS OF POLICE AND CITY MARSHALLS.—Annual Convention Galveston, Tex.—Hollis Baum, Chief of Police, Waco, President.

July 22-25.
LEAGUE OF WISCONSIN MUNICIPALITIES. Annual Convention, Neenah, Wis.

August 25-30.
FOURTH INTERNATIONAL CONGRESS ON SCHOOL HYGIENE, Buffalo, N. Y. Dr. Thomas A. Storry, Secretary General, College of the City of New York.

August 26-28.
CENTRAL STATES WATER WORKS ASSOCIATION.—Seventeenth Annual Meeting, Cedar Point, O.—R. P. Bricker, Secretary, Shelby, O.

September 1-6.
INTERNATIONAL ASSOCIATION OF FIRE ENGINEERS. Forty-first Annual Convention, Madison Square Garden, New York City. James McFall, Secretary, Roanoke, Va.

October 7-10.
AMERICAN SOCIETY OF MUNICIPAL IMPROVEMENTS.—Twentieth Annual Meeting, Wilmington, Del.—A. Prescott Folwell, Secretary, 50 Union Square, New York City.

National Good Roads Federation.

Regarding the attendance at the convention, Birmingham, Ala., April 24-25, Secretary J. A. Rountree reports that delegates have been appointed by Governors from the thirty-one states, from sixty-six counties in Alabama and other southern states, fifty-two cities, five national organizations, twenty state and county good roads associations and a number of automobile and labor clubs, an aggregate of over 2,500 delegates

have been appointed. It is believed that before the convention is called to order that every state in the Union will have appointed delegates and over one-hundred towns and cities will have representation at the meeting. The Jefferson Theatre where the meetings will be held will be elaborately decorated, both exterior and interior, and across the street will be a great good roads exhibit, that is well worth the coming to Birmingham to see. All in all, the meeting promises to be not only a successful and instructive, but an enjoyable occasion.

Jefferson County (Ky.) Road Engineers' Convention.

J. Russell Gains, road engineer, Jefferson county, called the convention to order at the Seelbach, Louisville, Ky., April 7. City Attorney Pendleton C. Beckley, representing Mayor W. O. Head, welcomed the visitors and Judge Muir Weissenger spoke in behalf of the county. The response was made by W. B. Paynter, county road engineer, Lawrenceburg. M. H. Crump, Bowling Green, the first speaker, gave a brief history of road building in Kentucky. State Commissioner of Agriculture J. W. Newman spoke on "Good Roads and Their Relation to Agriculture." He said that the cost of transportation of agricultural products to the railroad stations could be reduced 75 per cent. R. C. Terrell, State Commissioner of Public Roads, explained the new road law passed by the Legislature. Among the provisions of the law he pointed out was the one which makes it the duty of the commissioner to supply plans and specifications to the county road engineers if the price of bridges to be built or roads to be constructed exceeds \$500. He also said the limit placed on grades was a wise provision. Speaking of "Convict Labor," Col. R. J. McBryde, Louisville, advised that prisoners were under contract up to 1914 and 1916. Superintendent of Public Instruction Barksdale Hamlett, speaking of "Good Roads and Education," said that there had been an increase in school attendance of 35 per cent during the past year, owing to road construction.

R. S. Paris, Livingston county, spoke on "Earth Roads." He said that power graders for opening side ditches and four horse graders for crowning gave the most economical results.

Problems of construction and maintenance were considered at the last session. A. N. Johnson, state highway engineer of Illinois, was the first speaker, and had for his subject, "Highway Bridges." Guthrie Wilson, of Bardstown, county road engineer, spoke on "The Construction of Macadam Roads;" W. H. Edwards, Jr., road supervisor, of Versailles, spoke on "The Maintenance of Macadam Roads;" Pendleton C. Beckley, of Louisville, president of the Lakes to Gulf Highway Association,

spoke on "Prospects of National Aid in the Building of Roads;" J. F. Grimes, of Frankfort, assistant engineer of the Department of Public Roads, spoke on "The Split Log Drag and Its Operation;" James C. Wonders, senior highway engineer of the Office of Public Roads, Washington, D. C., discussed "Road Oils and Their Effect." Stereopticon lectures will be given at 8 o'clock this evening by A. N. Johnson, of Springfield, Ill., and M. O. Eldridge, assistant in charge of road management of the Office of Public Roads, Washington, D. C.

Officers were elected as follows: J. Russell Gains, Jefferson county, president; Guthrie M. Wilson, Nelson county, first vice president; Jacob Strauss, Larue county, second vice president; Taff Hawkins, Hickman county, third vice president. Other directors are W. H. Edwards, Woodford county; M. G. Sullivan, Whitley county; W. P. Caldwell, Boyle county; J. C. Gordon, Washington county; W. D. Smith, Meade county. A secretary will be appointed later by the board of directors.

PERSONALS

The following municipal officers have been recently elected or appointed:

CONNECTICUT.

Danbury—Mayor Anthony Sutherland.

DELAWARE.

Delaware City—Mayor Wm. Householder.

New Castle—Mayor, Richard S. Rodney.

SOUTH CAROLINA.

St. George—Mayor Dr. Carlisle Johnson.

FLORIDA.

Oakland—Mayor, F. C. M. Smith; Clerk, Chas. Maurice.

LOUISIANA.

Glenmora—Mayor, J. W. May.

TENNESSEE.

Maryville—Mayor, S. N. Everett. Manchester—Mayor, M. Wright Hickerson.

Sparta—Mayor, J. H. Potter.

MICHIGAN.

Flint—Mayor, Chas. S. Mott (re-elected).

Cadillac—Mayor, James Johnson. Muskegon—Mayor, John H. Moore. Mt. Clemens—Mayor, Wm. F. Nank. East Lansing—Mayor, Thos. Gunson. Allegan—Mayor, Dr. F. C. Castell. Eaton Rapids—Mayor, Chas. B. Fowler.

Kalamazoo—Mayor, Alfred B. Conable.

Bay City—Mayor, Gustavus Hine. Ludington—Mayor, Mr. Hardy. St. Clair—Mayor, John Schlinkert. Bad Axe—Mayor, Geo. L. Whitney. Ionia—Mayor, F. W. Green. Petoskey—Mayor, John L. Reyecraft. Alma—Mayor, J. M. Montigel. Owosso—Mayor, John H. Brandel. Corunna—Mayor, Howard Slocum. Monroe—Mayor, H. C. Orvis. Niles—Mayor, Wm. F. Phillips.

Marine City—Mayor, C. E. Blood.
Ann Arbor—Mayor, R. G. Mackenzie.
Grand Haven—Mayor, C. W. Cotton.
South Haven—Mayor, H. W. Barnes.
Iron Mountain—Mayor, Henry Neumeys.

Greenville—Mayor, Wm. E. Chase.
Adrian—Mayor, A. W. Chase.
Albion—Mayor, C. H. Burnett.
Charlotte—Mayor, George Brackett.
Jackson—Mayor, Charles S. Bailey.

MISSISSIPPI.

Monroe—Mayor, H. C. Bell.

MISSOURI.

St. Louis—Mayor, Henry W. Kiel.
Joplin—Mayor, J. F. Osborne.
Poplar Bluff—Mayor, R. G. Feltz.
Cape Girardeau—Mayor, F. A. Kage.
Sturgeon—Mayor, E. S. Stewart.
Warrensburg—Mayor, M. J. Mayes.
Rich Hill—Mayor, Henry Sheppard.
Rolla—Mayor, Edwin Long.
Union—Mayor, T. C. Alledsmeyer.
Bismarck—Mayor, L. C. Eaton.
Ste. Genevieve—Mayor, W. C. Bo-verie.

Jefferson City—Mayor, C. W. Thomas.

Richland—Mayor, J. L. Johnson.
Centralia—Mayor, A. Bruton.
Kirksville—Mayor, C. E. Still.
Farmington—Mayor, C. A. Bayer.

ILLINOIS.

Bloomington—Mayor, Jas. Costello;
City Clerk, Fred R. Evans; Engineer,
Elmer Folsom; Superintendent of
Streets, Chas. T. Evans.

West Lincoln—Commissioner of
Highways, Carl Aderman.

Elkhart—Commissioner of High-
ways, Everett Scherbandy.

Hurlbut—Commissioner of High-
ways, Harland Shockey.

Sheridan—Highway Commissioner,
C. C. Lawler.

Atlanta Township—Commissioner of
Highways, John Cheek.

Peoria—Mayor, E. N. Woodruff;
City Clerk, Fred B. Tracy.

MINNESOTA.

Brainerd—Mayor, R. A. Henning.

Mankato—Mayor, A. B. Meyer.

Hibbing—Chief of Police, Archie Mc-
Fayden; Water and Light Commis-
sioner, W. J. Ryder; Chairman Board of
Health, C. F. Morsman; Chairman
Park Board, Frank Ansley; Street
Commissioner, Gus. Jarvi; City Engi-
neer, Edw. Hawley. Mayor Powell ap-
pointed the following committee mem-
bers: Finance—Curren and Burrows;
Streets and Alleys—Geiselman and Cur-
ran; Police—Geiselman and Burrows;
Fire Department—Curran and Haley.

South St. Paul—Mayor, C. W. Clark
(re-elected).

Two Harbors—Mayor, Wm. Towl.
Duluth—Mayor, W. J. Prince.

NORTH DAKOTA.

Bismarck—Mayor, A. W. Lucas.

NEW YORK.

Herkimer—President, F. D. Gray.
Frankfort—President, Mr. Thurston
(re-elected).

Middleville—President, Charles Bow-
man.

Newport—President, B. H. Harris.
Hammondsport—President, Henry
Frey.

Painted Post—President, A. W. Pitts.
Prattsburg—President, H. C. Olney;

Water Commissioner, Jas. D. Merritt.
Savona—President, S. J. Moore.

Addison—President, W. C. Heine.
Cohochton—President, W. J. Faulk-
ner; Street Commissioner, H. W.

Drum.
Canisteo—President, J. R. Keeler.

Wayland—President, E. A. Mack.
Avoca—President, Frank Pixley.

Middleport—President, J. J. Shaugh-
nessy.

Wilson—President, A. O. Bonsteel.
Barker—President, Frank Putnam.

Blaisdell—President, John Kahler.
Angelica—President, J. A. Hogue;

Water Commissioners: Wm. Herdman,
Harry Evans.

Springville—President, I. H. Vail.
Akron—President, J. C. Jones; Street

Commissioner, G. W. Bostwick; Clerk,
R. J. Paxton.

Falconer—President, C. A. Carlson.
Bemus Point—President, E. R.

Waterman.
Mayville—President, W. S. Patter-
son.

Celoron—President, G. E. Lawson.
Lakewood—President, S. M. Bryant.

Panama—President, J. M. Bennett.
Sloan—President, J. H. Meahl (elect-
ed for fourteenth term).

Perry—President, Fred D. Fanning.
Moscow—President, L. Gurnan Starr.

Ellicottville—President, A. K. Stan-
bro.

Silver Springs—President, J. E. Nash.
Arcade—President, Frank Briggs.

Bronxville—President, H. W. Smith.
Dobbs Ferry—President, F. Q.

Brown.

TEXAS.

Bishop—Mayor, R. R. Hall; Com-
missioners, C. J. Jenkins, Zenas Deer.

Dallas—Mayor, G. C. Edwards;
Commissioners: Streets, S. B. Scott;

Finance, W. T. Henderson; Water
Works and Sewerage, R. R. Nelms;

Police and Fire, Louis Blaylock.
Carbon—Mayor, Thomas H. Dingler.

Carrizo Springs—Mayor, Pat. Speer;
Commissioners—C. C. Reeves and Jesse

J. Campbell.
Denison—Mayor, C. T. McElvaney.

Niles—Mayor, T. A. Carson (re-
elected); Chief of Police, W. H. Brown.

Abilene—Mayor, E. N. Kirby; Com-
missioners: W. O. Shackelford, J. N.

Ferguson, J. P. Wooten, E. H. Boone;
Chief of Police, J. J. Clinton.

Hillsboro—Mayor, M. W. Lovell.
Gainesville—Mayor, J. W. Puckett

(re-elected).
Sherman—Mayor, D. V. Lyon.

Cumby—Mayor, L. I. Mercer; Com-
missioner, D. M. Brandon.

Corsicana—Mayor, J. L. Halbert (re-
elected); Chief of Police, W. S. Knight;

Fire Chief, Rube Freedman.
Trenton—Mayor, J. C. Harshaw.

Hubbard—Mayor, W. Q. Bowman.
Grand Prairie—Mayor, J. T. Owens.

Seymour—Mayor, J. S. Whiteside.

Beeville—Mayor, Mr. Stephenson.

Waco—Commissioners: J. A. Little-
field, John Dollins, T. A. Canfield,

John Foster; City Secretary, J. C. Da-
vis; Water Commissioners: Wm. Sleep-
er, R. L. Cartwright, R. H. Rogers.

Angleton—Mayor, F. M. Harben (re-
elected).

Lufkin—Mayor, T. W. Largent.

Venus—Mayor, W. C. Bigger.

Alvin—Mayor, J. R. Bell.

Hallettsville—Mayor, H. M. Trippett.

Cameron—Mayor, E. P. Lester.

Cisco—Mayor, M. S. Michel.

Mineral Wells—Mayor, G. D. Stew-
art (re-elected); Secretary, W. A. How-
ard.

Hearne—Mayor, P. L. Brady, Sr.

Terrell—Commissioners: J. R. Bond,
G. H. Jackson.

Houston Heights—Mayor, R. F. Is-
bell.

Corpus Christi—Mayor, Roy Miller.

Van Alstyne—Mayor, Louis Garvey;

City Secretary, Taylor Emerson.

Brenham—Mayor, Alex. Griffin.

Timpson—Mayor, B. J. Hawthorne;

City Secretary, T. J. Molloy.

Rogers—Mayor, W. D. Sloan; Sec-
retary, S. H. Moore.

Holland—Mayor, J. N. Finley.

Clarksville—City Clerk, J. B. Webb.

Déport—Mayor, D. C. Oliver.

Bonham—Mayor, W. A. Spangler.

Bangs—Mayor, L. P. Dale.

Tjoga—Mayor, J. P. Mason.

Clarendon—Mayor, Thomas Connol-
ley.

Dawson—Mayor, J. H. McCulloch.

Jacksboro—Mayor, R. D. Sewell;

Street Commissioner, F. N. Foxhall;

Water Works Commissioner, J. P.
Hackley.

Stamford—Mayor, B. P. Davenport.

Comanche—Mayor, G. A. Cunning-
ham; City Secretary, N. A. Palmer.

Mesquite—Mayor, W. W. Walker.

Goldthwaite—Mayor, James Rahl

(re-elected).

Higgins—Mayor, W. P. Ewing.

Nocona—Mayor, J. L. Biter.

Jourdanton—Mayor, Geo. M. Martin.

Brownwood—Mayor, J. R. Looney

(re-elected).
Bells—Mayor, W. W. Massey.

Granger—Mayor S. D. Davis.

Daingerfield—Mayor, F. L. McDee.

Mt. Pleasant—Mayor, J. Frank Wil-
kinson.

Mt. Vernon—Mayor, W. E. Taylor.

Mexia—Mayor, T. Frank Smith;
Commissioners, W. B. Kendrick, W.

R. Smith.

Howe—Mayor, J. M. Culver.

Kosse—Mayor, W. L. Forbes.

Killeen—Mayor, Judge D. R. Bow-
mer.

Granbury—Mayor, J. B. Ross (re-
elected).

Marshall—Chief Commissioner, T. S.

Craven; City Secretary, H. S. Rice.

Sweetwater—Mayor, J. J. Ford.

Calvert—Mayor, J. W. Doremus.

McKinney—Mayor, H. A. Finch (re-
elected).

Lone Oak—Mayor, J. M. White.

Rockwell—Mayor, R. L. Halford;

City Secretary, J. C. McDonald.

MUNICIPAL APPLIANCES

The Keller & Price Sanitary Garbage Furnace.

This furnace was designed (and now in operation) to thoroughly consume garbage, sludge, dead animals, fetid matter or unsanitary combustible materials of any kind without nauseous or foul odors arising from the furnace or stack, consuming all noxious gases and evaporating instantly all liquid therein contained, and to be devoid of mechanical devices to facilitate cremation or evaporation.

The materials used in the construction of these furnaces are the best of their respective kinds and are specially designed to do the work properly, expeditiously and economically without machinery or complication of any kind, the inventor's object being to produce a furnace sanitary, mechanically perfect, and substantially constructed, in order to reduce the cost of operation to a minimum.

The design of this furnace, as explained by reference to the drawings, shows that any materials to be consumed are first deposited in the receiving or storage chamber "A," which has iron tight doors and is properly ventilated to prevent odors escaping. The materials are held in this chamber by specially designed percolating cut-off grate "B," ingeniously arranged and mechanically operated so as to open or close in part or full, leaving a clear, unobstructed opening, allowing any part or all garbage therein contained to fall into the cremating chamber upon the grate "C," there to remain until sufficiently evaporated and dried to use as fuel; then it is drawn over with rakes on the fuel grate "D," where it is finally consumed.

All liquid matter or moisture in the

substance to be cremated is percolated first through cut-off grate "B" in receiving chamber "A"; second, through cremating grate "C" to the flash evaporator tubes "E" (this device being an important feature), where it is instantly reduced to vapor, which materially expedites cremation. Should there be any overflow from the flash evaporator,



PARKER PUMP.

ors, it descends to the catch basin "F," where it is finally disposed of by evaporation from the heat through down-draft flues, thus preventing the escape of any liquid matter and dispensing with sewer connections entirely.

The K-P. Sanitary Garbage Reduction Furnace is made by the Penn Construction Company, Marietta, Pa.

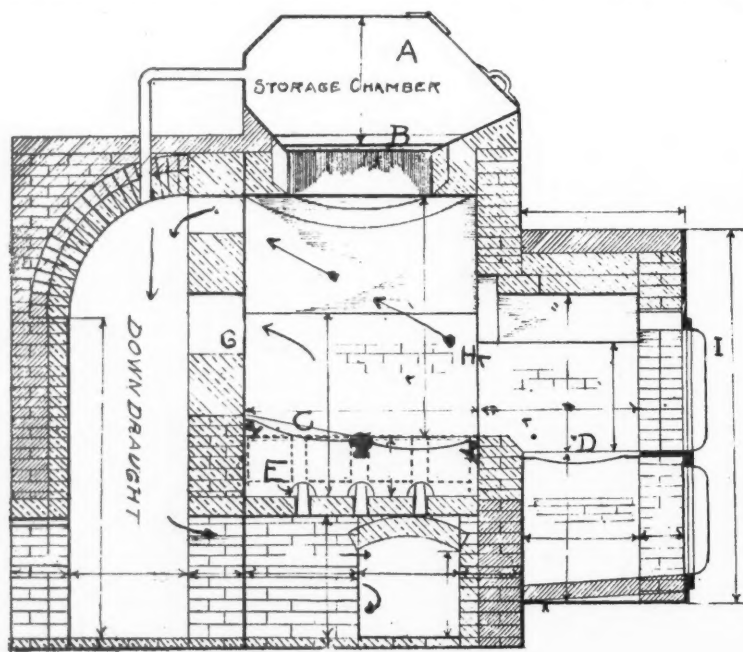
Parker Contractors' Pump.

The contractors' pumps made by A. A. Parker, Waterford, N. Y., have been favorably known for a long time. The

horizontally acting pump shown in the illustration is, however, comparatively new. This pump, known as No. 3, is a powerful, gasoline, motor-driven, double-acting, diaphragm pump that will raise and force water containing gravel, sand, mud or sewage without clogging. It has an extremely high lift, being capable of producing a 24-inch vacuum. Being double in action it gives a continuous flow of water. The vertical position of the diaphragms prevents grit from lodging and cutting them. The absence of all overhead work is a convenience. The pump will force water a reasonable height and distance. The truck is substantial, requiring a floor space of 2 by 5 feet; the outfit weighs 1,000 pounds. The manufacturer states that the pump will work on less than one quart of gasoline per hour and will raise and force from 6,000 to 8,000 gallons of water per hour. As compared with a steam power plunger pump, this pump is easier to run and much less liable to get out of order. As compared with a centrifugal pump it has the advantage that it will not drop its water when pumping part water and part air. It will handle as coarse material as a centrifugal using

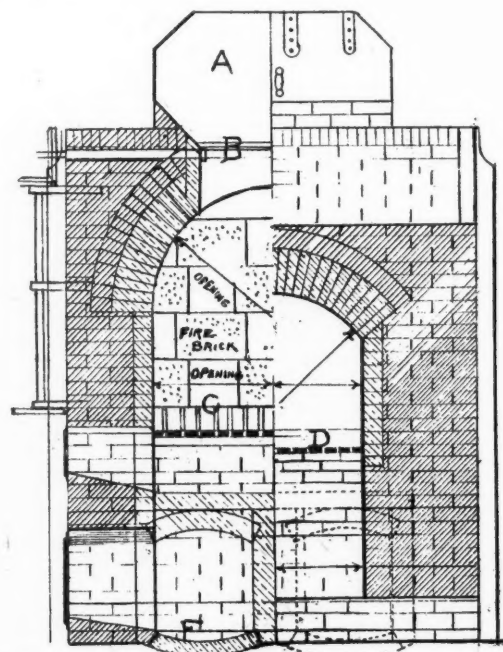
the same size suction. The rated horse power of the engine is $3\frac{1}{2}$; diameter of cylinder, $4\frac{3}{4}$ inches; length of stroke, $5\frac{1}{4}$ inches; size of flywheel, 20 inches; height, 38 inches; speed, 475; size of crank, $1\frac{3}{4}$ inches; gasoline capacity, $2\frac{1}{2}$ gallons; exhaust pipe, $1\frac{1}{4}$ inches; geared, 8 to 1 or 9 to 1.

The gasoline engine is of the hopper-cooled type, which is guaranteed not to freeze. It is constructed on the four-cycle principle. The speed can be changed while the engine is in motion.



Longitudinal Section.

THE K AND P IMPROVED SANITARY GARBAGE FURNACE.



Section G. H.

Section H. I.

WEEKLY CONTRACT NEWS

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we cannot guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also correction of any errors discovered.

BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
STREETS AND ROADS				
Ill.	Lawrenceville	2 p.m., Apr. 19	Improving road, culverts, retaining walls, &c.	J. S. Spiker, Engr., Vincennes, Ind.
Pa.	Mount Pleasant	2 p.m., Apr. 19	Stone roads, 3,250 lin. ft.	D. M. Groffeth, Secy.
N. C.	Chapel Hill	Apr. 19	Grading, clearing, draining, 7.585 miles	H. M. Stacy, Sec. Good Roads Com.
Tex.	San Antonio	11 a.m., Apr. 19	Spreading clay on roads	J. V. Huntress, Co. Aud.
Mich.	St. Joseph	Apr. 19	Macadam, 4½ miles	W. J. Cleary, Engr.
N. J.	Jersey City	2 p.m., Apr. 21	Improving 14th St.	W. H. See, Clk.
Ill.	Waukegan	8 p.m., Apr. 21	Brick, 18,000 yds.	M. J. Douthitt, C. Engr.
Minn.	Marshall	1.30 p.m., Apr. 21	State roads	E. S. Shepherd, Co. Aud.
Mass.	Boston	Noon, Apr. 21	Tar macadam, sheet asphalt	L. K. Rourke, Comr. P. Wks.
Pa.	Corry	Apr. 21	Brick, two streets	N. R. Dickson, C. Engr.
Mo.	Poplar Bluff	7.30 p.m., Apr. 21	Brick, 28,175 yds.	H. H. Wilcox, C. Engr.
Ont.	Lindsay	Apr. 21	Permanent roadways, 25,000 sq. yds.	R. Kylie, Chrmn. B. P. W.
Cal.	Sacramento	2 p.m., Apr. 21	Cement concrete, bitu. surface, 13 miles, macadam as phalt surface, 2 miles	A. B. Fletcher, Hwy. Engr.
Pa.	Sewickley	5 p.m., Apr. 21	Vit. brick, 3,035 yds.	M. M. Baker, Act. Engr.
N. Y.	Waverly	Noon, Apr. 21	Concrete pavement, curbs & gutters on 2 streets	E. B. Sebring, Vil. Clk.
N. J.	Bloomfield	8 p.m., Apr. 21	Telford pavements & bluestone sidewalks on number of streets	R. F. Davis, Town Clk.
N. Y.	Elmira	11 a.m., Apr. 21	Vit. brick, 10,500 sq. yds.	O. H. Gardner, C. Clk.
Mo.	Webb City	Apr. 21	Asphalt macadam, 7,263 yds.	E. W. Robinson, C. Engr.
O.	Ulrichsville	1 p.m., Apr. 21	Creosoted block bridge floor	W. C. Shott, Co. Aud.
Ala.	Guntersville	Apr. 22	Construction two highways	State Highway Comm.
La.	De Ridder	Apr. 22	Concrete sidewalks, 10 miles	McCorkle & Baylis, Birmingham, Ala., Engrs.
Tex.	Fort Worth	Apr. 22	Cardinal and sub-cardinal highways	J. C. Travilla, Consult. Engr.
Md.	Baltimore	Apr. 22	State highways, 7 sections	W. L. Marcy, Secy.
Utah	Salt Lake City	10 a.m., Apr. 22	Cement sidewalks	N. Warrum, City Recorder.
Utah	Ogden	10 a.m., Apr. 22	Concrete pavements	H. J. Craven, C. Engr.
O.	Painesville	Noon, Apr. 23	Brick, 10,622 yds.	E. L. House, Dir. P. S.
N. J.	Hoboken	4 p.m., Apr. 23	Repairing asphalt pavements	J. H. Londrigan, C. Clk.
Md.	Baltimore	Apr. 23	Macadam road at Loch Raven	Bd. of Awards.
N. Y.	L. Island City	11 a.m., Apr. 23	Asphalt block, wood block, sidewalks	M. E. Connolly, Pres.
Ill.	Glen Ellyn	7.30 p.m., Apr. 23	Pavements	Aetna Engr. Bureau, Chicago.
N. Y.	Brooklyn	11 a.m., Apr. 23	Granite block, sheet asphalt, wood block, &c.	A. E. Steers, Boro. Pres.
Pa.	Reading	Apr. 23	Labor laying Belgian blocks	Co. Comrs.
N. J.	Trenton	2.30 p.m., Apr. 23	Repaving with vitrified block, vitrified brick and sheet asphalt	Frank Thompson, City Clk.
O.	Columbus	Noon, Apr. 24	Macadam, three roads	J. Scott, Co. Clk.
Wis.	Two Rivers	7.30 p.m., Apr. 24	Macadam several streets	C. Baetz, Chrmn. Bd. P. W.
O.	Cleveland	Noon, Apr. 24	Concrete or asphaltic concrete	W. J. Springborn, Dir. P. S.
Wis.	Kilbourn	10 a.m., Apr. 24	Reinforced concrete, 15,211 yds.	E. B. Parsons, Engr., Watertown.
Minn.	Caledonia	1 p.m., Apr. 25	Grading state road	Robert Burns, Co. Aud.
O.	Cincinnati	Noon, Apr. 25	Improving roads	Stanley Struble, Pres.
O.	Columbus	2 p.m., Apr. 25	Brick, 1.93 miles, Akron-Canton Road	J. R. Marker, State Hwy. Com.
Pa.	Sunbury	11 a.m., Apr. 25	Belgian blocks, sidewalks	J. C. Tressler, Clk.
Wash.	Bellingham	Apr. 25	Two permanent highways	Co. Comrs.
O.	Columbus	2 p.m., Apr. 25	Bituminous macadam, 1.12 miles in Richfield; water-bound macadam, 3.5 miles in Franklin; bituminous surface concrete, 1 mile in Sioato; brick, 193 miles in Springfield; water-bound macadam, 1 mile in Pike	J. R. Marker, Comr. Hwys. Co. Comrs.
O.	Cleveland	11 a.m., Apr. 26	Brick, 1.33 miles in Euclid	J. F. Goldenbogen, Co. Clk.
O.	Cleveland	Apr. 26	Improving roads	G. F. Greiner, Secy.
Pa.	Ridgeway	Noon, Apr. 28	Brick, 11,400 yds.	F. A. Pease Engr. Co.
O.	Euclid	Noon, Apr. 28	Brick, two streets	H. H. Hunter, C. Clk.
Mich.	Mt. Pleasant	Apr. 28	Pavement, 11,000 yds.	F. W. Simons, Vil. Engr.
N. J.	Ridgewood	8 p.m., Apr. 29	Brick, 3,300 yds.	Bd. Pub. Works.
N. Y.	Niagara Falls	Apr. 29	Paving several streets	C. E. Schaefer, Dir. P. S.
O.	Springfield	Apr. 30	Macadam	K. C. Gavnor, Engr.
Ia.	Sheldon	May 1	Concrete, brick and asphalt, 12,000 yds.	W. P. Neafsey, St. Comr.
N. J.	Elizabeth	8.30 p.m., May 1	Brick, 2,820 yds.	L. A. Amsden, C. Engr.
O.	Ashtabula	May 1	Brick pavement, 24,000 yds.	H. H. Emyer, C. Engr.
Mich.	Saginaw	May 1	Paving several streets, cost, \$110,000	J. E. Stotier, Vil. Clk.
O.	Girard	Noon, May 1	Paving sidewalks, crosswalks, &c.	Bd. Pub. Wks.
Wis.	Wausau	May 15	Seven blocks of vitrified brick	
SEWERAGE				
Cal.	San Francisco	3 p.m., Apr. 19	Sewers in park	Bd. of Pub. Wks. City Clk.
N. J.	Perth Amboy	Apr. 21	Sewer and water connection	E. C. Thomas, C. Engr.
Mo.	Poplar Bluff	7.30 p.m., Apr. 21	Pipe sewers, 27,000 ft. 6 to 24-in.	C. L. Groesbeck, City Clk.
Mich.	Pontiac	1.30 p.m., Apr. 21	Sewers in various streets	G. L. Brown, Mayor
N. J.	Audubon	8 p.m., Apr. 21	Vit. pipe, 66,000 ft. disposal works	B. Fix, Vil. Clk.
O.	Shelby	Noon, Apr. 21	Storm sewers	C. W. Baldwin, Dir.
Pa.	Chester	10 a.m., Apr. 22	Sewers and disposal plant at Home	E. B. Ulrich, City Engr.
Pa.	Reading	2 p.m., Apr. 22	Concrete and pipe sewers. Cost, \$170,000	W. J. Springborn, Dir.
O.	Cleveland	Noon, Apr. 22	Furnishing sewer pipe	M. E. Connolly, Boro. Pres.
N. Y.	L. Island City	11 a.m., Apr. 23	Concrete and vitrified pipe sewers	

BIDS ASKED FOR

STATE	CITY	REC'D UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Ill.	Glen Ellyn	7.30 p.m., Apr. 23.	Sewers	Aetna Engr. Bureau, Chicago.
Md.	Baltimore	11 a.m., Apr. 23.	Reinforced concrete pipe	J. H. Preston, Mayor.
O.	Painesville	Noon, Apr. 25.	Pipe sewers, 7,000 ft. 10 to 20-in.	F. N. Downer, C. Engr.
Ind.	South Bend	Apr. 25.	Pipe sewer, 1,500 ft. 24-in.	W. S. Moore, City Engr.
Mich.	Flint	3 p.m., Apr. 25.	Sewers, 33 miles 8 to 66-inch; est. cost, \$93,125.	D. E. Newcombe, City Clk.
Wis.	Jefferson	2 p.m., Apr. 26.	Storm sewers	Bd. of Pub. Wks.
Me.	Kennebunk	2 p.m., Apr. 26.	Pipe sewers, 15,200 ft. 6 to 15-in.	A. A. Richardson, Chmn. Con.
Ia.	Fort Dodge	9 a.m., Apr. 28.	Sanitary sewer	W. L. Tang, City Clk.
O.	Toledo	Noon, Apr. 29.	Sanitary sewer	C. J. Sanzenbacher, Co. Aud.
N. J.	Newark	Apr. 29.	Section No. 6 Passaic Valley Sewer	Passaic Valley Sewer. Comr.
Mo.	Kennett	Apr. 30.	Clay pipe, 8½ miles, pumping and disposal plant.	J. D. Spence, Mayor.
O.	Springfield	Apr. 30.	Sewers	C. E. Schaefer, Dir. P. S.
N. Y.	Elizabeth	8.30 p.m., May 1.	Two small sewers	W. P. Neafsey, St. Comr.
Fla.	Orlando	May 1.	Sanitary sewers, 26½ miles.	G. R. Ramsey, C. Engr.
O.	Ashtabula	May 1.	Sewer, 950 ft. 30-in.	L. A. Amsden, C. Engr.
N. Y.	Oswego	2 p.m., May 2.	Sewer system and disposal plant.	C. H. Snyder, C. Engr.
Ala.	Birmingham	May 6.	Concrete sewer, 6,000 ft.; 5,000 ft. brick sewer, 10,000 ft. laterals	W. G. Kirkpatrick, City Engr.
N. Y.	Oneonta	May 7.	Vit. pipe, 9,150 ft. 10 to 21-in.	H. S. Close, C. Clk.
Neb.	Geneva	2 p.m., May 12.	Concrete pipe, 4,000 ft. 36-in.	F. B. Ashton, Dist. Secy.
La.	Ruston	May 15.	Sewerage system	S. D. Pearce, Pres.

WATER SUPPLY

N. Y.	Fort Leyden	7 p.m., Apr. 19.	Waterworks extension	W. H. Burk, Pres.
N. Y.	New York	2 p.m., Apr. 21.	High pressure fire service mains.	H. S. Thompson, Comr.
Ill.	Melrose Park	Apr. 21.	Air lift systems, turbine pumps, electric equipment.	C. C. McLain, Engr.
Kan.	Jewell City	7 p.m., Apr. 21.	Water works system	O. E. White, City Clk.
Ill.	Springfield	2 p.m., Apr. 21.	Pumping station filter plant, dam, reservoir, &c.	F. D. Whipp, Superv.
Ill.	Anna	2 p.m., Apr. 21.	Filter plant, 2,000,000 gal., reservoir, electric pumping station	Bd. of Administration.
Ia.	Whiting	10 a.m., Apr. 21.	Electric light and power plant.	B. L. Frost, Town Clk.
Fla.	Pensacola	Noon, Apr. 22.	Reinforced concrete reservoir.	L. E. Thornton, City Engr.
Mo.	St. Louis	Noon, Apr. 22.	Cast-iron pipe, 3,030 tons.	Bd. of Pub. Improvements.
Ia.	Guthrie Center	1 p.m., Apr. 22.	Water works extension	Town Clk.
Wis.	Monroe	Apr. 23.	Mains, 2,500 ft. 4-in.; 800 ft. 6-in.	M. T. Gettlinge, Supt.
S. D.	Huron	2 p.m., Apr. 23.	Water mains, 3,600 ft. 4-in.	C. M. McIlvaine, Secy.
N. Y.	Honeoye Falls	Apr. 24.	Mains, 5½ miles, pumping stations and tank.	White & Getman, Engrs, Buffalo.
Wis.	Milwaukee	10.30 a.m., Apr. 24.	Concrete or brick intake tunnel, 4,000 ft., 12-ft. diameter.	F. G. Simmons, Comr. P. Wks.
Ga.	Valdosta	3 p.m., Apr. 24.	Triple expansion duplex pumping engine, 3,000,000 gals.	J. T. Roberts, Mayor.
Tex.	Temple	4 p.m., Apr. 25.	Furnishing 1,800 ft. c.-i. pipe, 14-in.; 4,000 specials.	Bd. Water Comrs.
O.	Euclid	Apr. 28.	Water mains, 6-in.	F. A. Pease Engr. Co.
Mo.	Marysville	Apr. 28.	Brick water tower, steel tank.	H. L. Flint, Supt.
N. Y.	New York	Apr. 29.	Appurtenances for gate chambers.	Bd. of Water Supply.
Canada.	Moose Jaw	Noon, Apr. 30.	Cast-iron pipe and specials.	City Commissioners.
Md.	Baltimore	Apr. 30.	Filtration plant; cost, \$1,750,000.	Bd. of Awards.
Mo.	Kennett	7 p.m., Apr. 30.	C.-i. pipe, 8½ miles, tank, tower & pumping station, deep wells	J. D. Spence, Mayor.
Ont.	London	Noon, May 1.	C.-i. pipe, 1,450 tons 4 to 12-in., lead, hemp, &c.	Bd. Comrs.
D. C.	Washington	2 p.m., May 1.	Water meters, 10,000 ½-in.	C. H. Rudolph, Comr.
Va.	Covington	May 5.	Franchise for electric light plant.	W. C. Wright, Clk. Council.
O.	Willoughby	May 10.	High service pumps, etc.	Bd. of Pub. Affairs.
Egypt	Cairo	July 1.	Furn. equipmt for pumpg station, 7,000,000 meters.	Pub. Works Ministry.

LIGHTING AND POWER

D. C.	Washington	10.30 a.m., Apr. 19.	Induction direct current motors, &c.	Maj. F. C. Boggs.
Canada.	Port Arthur	Apr. 21.	Telephone pole equipment & line supplies.	J. J. Hackney, Comr.
Sask.	Pegina	April 30.	Synchronous motor generator or converter set.	E. W. Bull, Supt.
S. D.	Willow Lake	May 1.	Electric light plant	J. F. Flint, Aud.
Pa.	Chester	10 a.m., Apr. 7.	Tungsten lights for city hall.	H. L. Morris, Chmn. Com.
Minn.	Lesueur Center	Noon, May 6.	One or two steam boilers.	J. H. Kaisersatt, Co. Aud.
Manitoba	Winnipeg	11 a.m., May 15.	Large generators for turbines	M. Peterson, Secy.
N. J.	Camden	June 16.	Underground conduits, 219,000 ft., subway, 24,000 ft., 128 standards, &c.	C. Council.
Chile	Santiago	Sept. 10.	Illuminating plant for port works	Comision de Puertos.

FIRE EQUIPMENT

Sask.	Regina	Apr. 21.	Motor apparatus, fire hose, etc.	City Comrs.
Canada.	Moncton	Apr. 22.	Motor Comb. pump & hose cart, 700 gals. capacity.	City Clk.
Mass.	New Bedford	Apr. 24.	Two motor pumping engines and motor tractors.	Mayor Ashley.
Wash.	Tacoma	1 p.m., Apr. 26.	One motor propelled automatic hoist, 75 ft. aero hook and ladder truck	A. U. Mills, Comr. Pub. Saf.
Sask.	Moose Jaw	May 9.	Motor apparatus and alarm system.	City Secy.

BRIDGES

Ill.	Barry	1 p.m., Apr. 21.	Reinforced concrete bridge.	Harry Ware, Town Clk.
N. Y.	Norfolk	2 p.m., Apr. 22.	Bridge	H. L. Whipple, Town Clk.
Neb.	Lexington	10 a.m., Apr. 22.	Concrete bridge	Co. Clk.
O.	Hamilton	Apr. 22.	Bridge over canal. Cost, \$14,000.	Co. Comrs.
Ill.	Ottawa	1 p.m., Apr. 22.	Concrete bridge; cost, \$5,000.	Co. Clk.
N. Y.	West Vienna	Apr. 24.	Concrete bridge; cost, \$20,000.	A. O'Brien, Co. Engr.
O.	Akron	Apr. 24.	Concrete bridge, 763 ft. long.	C. L. Bower, Co. Clk.
Pa.	Pittsburgh	Noon, Apr. 25.	Five bridges	R. J. Cunningham, Co. Compt.
Ill.	Ottawa	Apr. 30.	Concrete bridge	A. E. Bach, Co. Clk.
Pa.	Mount Carmel	May 2.	Concrete bridge	Co. Comrs.
O.	Cleveland	11 a.m., May 7.	Concrete bridge	J. F. Goldenbogan, Clk.

MISCELLANEOUS

O.	East Youngstown	Noon, Apr. 21.	Retaining wall	P. J. Carney, Clk.
N. J.	Perth Amboy	8.30 p.m., Apr. 21.	Removal of garbage	G. M. Adair, St. Comr.
Wash.	Tacoma	10 a.m., Apr. 22.	Shelter station in park	M. Mayer, Secy.
O.	Cleveland	Apr. 22.	Triple effect evaporator.	W. J. Springborn, Dir. P. S.
O.	Cleveland Heights	Noon, Apr. 22.	Steam roller	H. H. Canfield, Vil. Clk.
Ga.	Savannah	Noon, Apr. 25.	Incinerator for garbage, 130 tons cap. or destructor.	R. J. Davant, Mayor.
Mass.	Boston	10 a.m., Apr. 25.	Stone crusher	Navy Dept., Washington, D.C.
Sask.	Moose Jaw	Noon, Apr. 30.	Valve, chamber frames, manhole frames.	City Comrs.
N. Y.	Lockport	About May 1.	Garbage disposal plant, cost \$8,000	J. F. Freshee, C. Engr.
Ga.	Augusta	Noon, May 1.	Police signal system	L. C. Hayne, Mayor.
N. C.	Lumberton	May 5.	Two jail cells	Robeson Co. Comrs.
N. J.	Belleville	May 14.	Town hall	Town Clk.
Cal.	Los Angeles	June 20.	Bldg. & operating garbage disposal plant. Reduction or incineration	Bd. of Public Works.

STREETS AND ROADS

Birmingham, Ala.—Bids are expected to be requested shortly by City Commissioners for proposed boulevard between East Lake and Ensley along Third ave. west and First ave. east.

Marion, Ala.—At meeting of the board of county commissioners \$1,500 was set aside to improve Fikes ferry road leading out from incorporated limits of Marion. It was also authorized to extend state road from foot of Joyce hill to Cahaba river at Borough's ferry.

Oneonta, Ala.—Blount county will have good roads. At election held bond issue of \$150,000 for road building and improvement was authorized.

San Simon, Ariz.—Many citizens of San Simon town and valley are signing petition to board of supervisors of Cochise county for opening of road from San Simon to Connetts, four miles south of town, thence east to Thompson's well; thence south to Greenway's; thence south to mouth of Turkey creek.

Ozark, Ala.—County commissioners have accepted offer of state to give \$4,000 towards construction of model public highway on condition that county boards put up equal amount, and put in their application for money. Board will meet again on April 21 to select roadbed to be thus improved.

Auburn, Cal.—Automobile boulevard between Auburn and Grass Valley is being considered.

Los Angeles, Cal.—Council has instructed city engineer to propose ordinance for paving of Vermont ave. with bitulithic.

Port Angeles, Cal.—Bids will at once be called for construction of at least two units of Olympic highway, proposed new road which will run entire length of county and form connecting link with State highway.

Redwood City, Cal.—Notices have been sent out of election in San Mateo county on April 8th, on proposed bond issue of \$1,250,000 to be expended in building system of roads throughout county.

San Francisco, Cal.—Board of Works has recommended to Supervisors passage of ordinance providing speedy and adequate procedure for construction and repair of sidewalks.

Meeker, Colo.—County commissioners of Rio Blanco county will concentrate their efforts on forty-five miles of famous mountain highway between Meeker and Rifle, with aid of Garfield county, state and national governments, and hundreds of citizens who have volunteered. It is proposed to macadamize it and provide drainage on both sides.

Terryville, Conn.—Bids are asked for improving South Eagle st.

Waterbury, Conn.—City engineer will be instructed to draw estimates on widening of Field st. and cost of construction.

Wilmington, Del.—Council is preparing \$150,000 bond issue for street improvements and \$60,000 for purchase of public playground site.

Wilmington, Del.—Ordinances providing for \$150,000 loan for street and sewer improvements has been introduced in City Council and referred to finance and law committee.

Washington, D. C.—Congress has been asked to appropriate sum of \$1,300,000 previously authorized to acquire land in Rock Creek valley needed for parkway connection between Potomac Park and Zoological Park.

Jacksonville, Fla.—Ordinances for improvement of four streets passed on their first reading, with materials and estimates based on preliminary bids, as follows: St. Johns ave., King st. to city limits, asphaltic concrete on concrete base; preliminary estimate, \$2.72 per sq. yd. East Bay st., Marsh to Hogans creek, vitrified brick on concrete base, preliminary estimate, \$2.43 per sq. yd. Sparring st., Adams to Duval st., vitrified brick on sand base; preliminary estimate, \$2.32 per sq. yd. Main st., Bay st. to Hogans creek, vitrified brick on concrete base; preliminary estimate, \$3.03.

Jacksonville, Fla.—Following show substance of several ordinances recommended by laws and rules committee of city council, giving both material to be used and estimated cost based on preliminary bids for different streets to be paved: Ganitoid on concrete base—Ionia st., Jessie to Union, \$7,944.89; Lee st., Bay to Adams, \$5,994.10. Vitrified brick on sand base—Cedar st., Union to State, \$1,479.88; State st., Madison to Davis, \$1,621.93; Eagle st., Hogan to Julia, \$2,661.58; Union st., Cedar to Clay, \$2,612.11; Lancaster terrace, Riverside ave. to Bulkhead, \$1,174.13. Dolarway—Market

st., Eighth to city limits, \$15,022.87; Carolina st., Laura to Julia, \$5,159.01; Charles st., Forest to Price, \$2,278.26; Orange st., Main to Hogan, \$4,974.42; North st., Hogan to Julia, \$2,254.94; Duval, from Davis to Stuart, \$6,498.78; Julia st., Eagle to Hogan's creek, \$2,571.16; Price st., Magnolia to Myrtle ave., \$8,101.91; Lafayette st., Bay to Church, \$5,621.30; Schofield st., Hubbard to Market, \$1,941.19. Asphaltic concrete on concrete base—Park st., Margaret to Forest, \$33,042.37; Pearl st., Boulevard to city limits, \$48,607.17; Broad st., Ashley to State, \$7,397.29. Asphalt block on concrete base—Church st., Julia to Hogan, \$3,666.50. Vitrified brick on concrete base—Bay st., Market to Marsh, \$29,450.61; Clay st., Ashley to State, \$8,316.45; Washington st., Ashley to Union, \$6,288.25; Bay st., Broad to Cleveland, \$20,939.11.

Jacksonville, Fla.—Improving of Myrtle ave., from King's road to city limits, is being considered.

St. Augustine, Fla.—Bond issue for improving various roads is being considered.

Atlanta, Ga.—City Engineer Blake has reported that it would cost about \$38,000 to pave Liberty st., between Broadway and South st.

Atlanta, Ga.—At meeting of Street Committee of Council and Public Works Committee of County Board, it was agreed that repavement of Peachtree st., from Sixth st. to Fifteenth, shall be commenced as soon as proper ordinance can be passed by Council. The Southern Bitulithic Co. (Warren Bros.) will furnish half of material, while remaining cost of between \$17,000 and \$20,000 will be paid by city.

Macon, Ga.—On agreement of paving concern to finance project until 1914, council has adopted resolution introduced by Alderman Hupp, providing for pavement of streets—Third, from Plum to Oglethorpe; Arch, from Third to Arch and Oglethorpe; Oglethorpe, from Third to the present pavement on Oglethorpe; Orange, from New to First.

Manchester, Ga.—City of Manchester is preparing to construct modern road across Pine Mountain to connect with roads in Talbot county. Surveyor was in city mapping out route for road. It is said highway will cross mountain with not more than a 5 per cent. grade at any place.

Ottawa, Ill.—Election will be held for voting on west side paving.

Bluffton, Ind.—County council of Wells county has appropriated \$9,010 for road and bridge repairs.

Marion, Ind.—Six more of Marion's streets are to be improved. They are Ninth, Thirty-fifth, Gallatin, Thirty-eighth, Torrence and Wigger sts. They will be improved under the three-mile road law. They will be paved with brick. Four improvement resolutions calling for improvement of streets under three-mile road law have been presented to common council and passed.

Muncie, Ind.—Brick has been specified by special committee of Council as material to be used in following improvements: For paving of Madison st., from Main st. to Kirby st.; for paving of Plum st., from Main st. to Jackson st.; for paving of Franklin st., from Washington st. to Howard st.; for paving of High st., from Charles st. to first alley south of Howard st.

Terre Haute, Ind.—Commissioners will shortly let contracts for \$150,000 more of road work, consisting of brick paving for roads from city limits to township limits.

Louisville, Ky.—Board of Public Works will construct various streets and sidewalks.

Trenton, Ky.—Bond issue of \$190,000 will be voted on April 12 for purpose of building turnpikes.

New Iberia, La.—City Council approved plans and specifications submitted by City Engineer Robb for paving of twelve miles of additional sidewalks in southern section of city, mayor being authorized to advertise for bids.

Piquemine, La.—Police Jury has adopted ordinance creating Road District No. 1, in First Ward, for purpose of completing gravel road along river front from White Castle to Ascension line. Election will be held May 20 to vote on bond tax, amounting to \$10,000.

Weverton, Md.—Washington County Commissioners have authorized construction of State road from Weverton to Harper's Ferry.

Boston, Mass.—There will be spent during year \$800,000 for laying out of new streets and improvement of other streets.

Gloucester, Mass.—Sum of \$3,000 additional has been appropriated for maintenance of highway, including cost of labor and improvements.

Lawrence, Mass.—Alderman Hannagan has announced the order in which permanent improvements will be done this summer on streets to be block paved. Streets will be paved in this order: Haverhill st. from Broadway to Boston & Maine R. R., 2,591 sq. yds., 62,184 blocks; West st., from Haverhill to Carey's line, 2,080 sq. yds., 49,920 blocks; Jackson st., from Essex to Haverhill st., 4,470 sq. yds., 106,728; Elm st., from Lawrence st. to Short st., 2,017 sq. yds., 48,408 blocks; Park st., from Lawrence to Hampshire st., 4,752 sq. yds., 114,048 blocks; Merrimack st., from South Union to South Broadway, 1,472 sq. yds., 35,328 blocks; South Broadway, from North Canal to Boston & Lowell tracks, where new paving has not been laid, 10,673 sq. yds., 256,152 blocks; Andover st., from South Union to Winthrop ave., 4,240 sq. yds., 101,760 blocks; Merrimack st., from Shawshen river to Bay State barn, 5,073 sq. yds., 121,752 blocks. Besides the above, Newbury st., from Essex st. to Durant sq., East Haverhill st., from Durant sq. to Prospect st., and Prospect st. to the Methuen line will also be paved if the Bay State St. Ry. Co. appropriates the money to do it on the condition that it can have double tracks on those thoroughfares.

Hibbing, Minn.—Mayor Power and new village council are laying plans for extensive municipal improvements, including considerable paving work.

St. Louis, Mo.—Extensive construction of sidewalks is being planned.

Camden, N. J.—Street Committee of Council has instructed City Engineer Farnham to prepare plans and specifications for paving of Westfield ave., between Twenty-sixth and Thirty-ninth sts., with Bel... blocks on concrete foundation. Bids will be opened as soon as possible.

Elizabeth, N. J.—Ordinances have been adopted for improvement of various streets.

Irvington, N. J.—Ordinance has been passed for grading of Ridgewood ave., from Clinton ave. west, northerly a distance of 350 ft. more or less.

Jersey City, N. J.—Chief Engineer Charles Van Keuren of the Street and Water Board has been instructed by commissioners to make examination of condition of all asphalt pavements in city, and to prepare estimates upon which to base bids for putting in order of asphalt streets.

Lambertville, N. J.—Lambertville authorities are laying plans for further improvements to streets. All thoroughfares will be cleaned and repaired and then treated to coat of oil. Several sidewalks have been ordered repaired. Mayor will also call on all citizens to observe general cleaning-up day.

Oaklyn, N. J.—Clinton ave. will be macadamized.

Pennsgrove, N. J.—Several miles of cement walk will be laid shortly.

Perth Amboy, N. J.—Council has passed ordinances for paving of Cortlandt, Mechanic and Oak sts.

Trenton, N. J.—Bill has been passed authorizing bond issue for repaving streets.

Brooklyn, N. Y.—The public improvement calendar of Board of Estimate is a big one. Board committed city to seventy-two improvements in Brooklyn and Queens, estimated cost of which is \$758,300. Of above mentioned \$458,300 is for final authorization, 26 undertakings in Brooklyn estimated cost \$119,300, and 14 in Queens, estimated cost \$339,000. Of \$300,000 of preliminary authorizations, 25 for Brooklyn will cost, it is estimated, \$220,300, and 7 for Queens, \$79,700. Principal undertakings for Brooklyn is grading and flagging of East 94th st. from East New York ave. to Linden, and from point 80 ft. south of Ditmas ave. to Ave. M. estimated to cost \$44,600. Preliminary authorization for paving Flatbush ave., extension with granite blocks from Fulton st. to Concord calls for expenditure of \$76,000.

Highland Mills, N. Y.—At special meeting of Board of Supervisors Supervisor Bullwinkle introduced resolution providing for incorporation of county highway, known as Central Valley, Turner and Woodbury road, by widening, straightening and providing bituminous-macadam surface upon present roadbed for distance of 5½ miles. Resolution had approval of good roads committee and was adopted.

Poughkeepsie, N. Y.—On motion of Alderman McDermott, Church st. has been ordered paved with sheet asphalt except on hill where bituminous macadam will be used.

Rochester, N. Y.—Improvement of various streets has been authorized.

Rochester, N. Y.—Proposition of paving Genesee st. between West and Brooks aves., is being discussed.

Utica, N. Y.—Park board has determined on continuation of Parkway east of Mohawk st.; to construct road 24 ft. wide and to use as road surface macadam penetration process; to grade and drain road through to Culver ave. and to complete top surface as far as funds would permit. Board has adopted plans and specifications for road as described, and it will request Board of Control and Supply to let contract as soon as possible.

Henderson, N. C.—Election has been held on bond issue of \$100,000 for permanent street building and improvement resulting in overwhelming majority for issue.

Barberton, O.—Appropriation of \$5,000 has been made to repair streets.

Toledo, O.—Service Director Cowell has been authorized by public improvement committee of council to prepare plans and specifications for repaving Cherry st., from Bancroft st. to Collingwood.

Youngstown, O.—Resolutions have been adopted for paving and sidewalk-ing of various streets.

Youngstown, O.—Good Roads Commissioners have accepted bid from C. E. Dennison & Co. of Cleveland, offering premium of \$775 on issue of \$150,000 in 5 per cent bonds.

Youngstown, O.—Bids will be received by village of East Youngstown by village clerk until 7:30 p. m., June 9, for purchase of bonds for paving, grading, sewerage and sidewalking. P. J. Carney, Village Clerk.

Portland, Ore.—Plans for scenic boulevard, from northern limits of Portland north, nine miles, are being worked out by officials of Linnton.

Altoona, Pa.—It is proposed to pave 20th st., between Margaret and N. Ninth aves., with concrete.

Butler, Pa.—Repaving of West Clay st. is under consideration.

Chambersburg, Pa.—Council will expend total of about \$90,000 on paving streets of town.

Chester, Pa.—Bill has been adopted appropriating \$10,000 for repaving of Third st., Market to Concord aves.

Chester, Pa.—City will readvertise for bids for street cleaning.

Erie, Pa.—Resolution has been adopted directing city engineer to prepare specifications and advertise for proposals for grading, curbing and paving Twelfth st., from East ave. to city line.

Erie, Pa.—Ordinances have been passed providing for various street and sewer improvements.

Erie, Pa.—Ordinances have been approved for improving of various streets.

Lehigh, Pa.—Lehigh Council has decided to hold special election to create bond issue for paving of First st.

Middletown, Pa.—Paving of various streets is being discussed.

Sharon, Pa.—Plans are being made for paving of numerous streets.

Pittsburgh, Pa.—Council has affirmed ordinance for repaving of streets to cost about \$230,000.

Portage, Pa.—Petitions have been presented for paving Caldwell ave. to East Railroad st.

South Williamsport, Pa.—Proposed new state road, which is to run up Southern ave. from Market st. to Maynard st., is being discussed; estimated cost, \$28,000 per mile for brick pavement.

Steelton, Pa.—Council has passed favorably on ordinance providing for issue of \$4,000 bonds for street paving, sanitary hospital and additions to water mains.

Williamsport, Pa.—State road from Market st. through to borough line at Du Bois town is under consideration.

Cumberland, R. I.—Town council committee on highways has instructed Highway Surveyor Connolly to make improvements on Earl st. and Mowry ave.

Middletown, R. I.—Appropriation of \$2,000 has been voted for ordinary repair of highways, and \$5,000 for stone roads.

Dandridge, Tenn.—By vote of 15 to 6 court under recent act, has ordered \$150,000 bond issue for roads for county, including sum of \$25,000 for a bridge over river at this place.

Knoxville, Tenn.—South Knoxville citizens are unanimously in favor of construction of tarvia roads along Sevier-

ville and Martin Mill pikes in South Knoxville.

Nashville, Tenn.—Bill has been passed appropriating \$2,500 for extension of Woodland st. sewer; \$1,000 for Gallatin road sewer; \$2,500 for N. Fourth st. sewer; \$1,000 for Elk st. sewer, and \$1,500 for Main st. sewer.

Union City, Tenn.—Union City has voted on thirty thousand dollar sidewalk and street bond issue, which carried by very large majority, about three to one in favor.

Beaumont, Tex.—City council has taken initial steps toward paving Magazine st. from Walnut st. to and across Pine st. and Franklin st. from Park to Railroad ave.

Midland, Tex.—Good roads mass meeting has been held at Midland to discuss proposed bond issue of \$50,000 to build good roads in Midland county.

Murray, Utah.—It is planned to build one mile of good road near Murray.

Farmville, Va.—Proposition is being considered by council of town of Farmville for building of macadam road from that town to Buckingham Courthouse, distance of about 25 miles.

Bristol, Va.—The Bristol Wise Highway Association has been formed in Bristol for purpose of promoting construction of macadamized highway from Bristol to Big Stone Gap, connected with new \$1,000,000 system of roads in Wise county.

Richmond, Va.—City Engineer has been instructed to grade 32d st., from M to N sts.

Richmond, Va.—On recommendation of City Engineer Bolling, a subcommittee of Council Committee on Streets has recommended opening of eighty-foot street from Main to the new Mayo Bridge, by way of 15th st. and dock property.

Spottsylvania, Va.—Board of supervisors has rejected bids received for \$73,000 road bonds, and same will be readvertised.

Everett, Wash.—City commissioners have passed resolution of intention to improve Lombard ave. from Hewitt ave. to Sixteenth st. by laying asphalt street paving and cement sidewalks, together with concrete curbs.

Seattle, Wash.—Bids for regrading Ninth ave. northwest have been rejected, and new bids will be advertised.

Seattle, Wash.—Resolutions have been adopted providing for improvement of large number of streets.

Seattle, Wash.—Plans have been approved for following improvements: West 60th st., concrete walks; estimated cost, \$24,000. Highland drive, paving; estimated cost, \$30,700. 23d ave. southwest, grading, etc.; estimated cost, \$5,700. 2d ave., repaving, etc.; estimated cost, \$59,700. 37th ave., grading; submitted to Dimock. 15th ave. west, paving, etc.; estimated cost, \$22,500.

Spokane, Wash.—Following improvements are asked by County Good Roads Committee: A connection from the west end of Leach creek bridge with Sunset blvd.; E. Sprague Ave. from end of present paving to city limits, to connect with great Apple way; a connection from end of the paving on N. Monroe st. with North Wall st. paving; improvement of Illinois ave. from Hamilton st. to C st. and C st. from Illinois ave. to south limits of Hillyard, to connect with Mead road.

Tacoma, Wash.—It has been informally decided that special election for paving improvements will be held May 10. The paving proposals include: Puyallup hill road, city's half, county to pay half, \$9,000; Bismarck connection to the military road, city's half, county to pay half, \$1,500; Front st. connection with Ruston \$6,900.

Appleton, Wis.—Twelve towns in this county have voted sums of money for improvement of roads which will make \$23,100 available for this purpose, with State aid received for 1913.

Superior, Wis.—Paving of Grand ave. has been petitioned for.

CONTRACTS AWARDED.

Carrollton, Ala.—For construction of 4 miles of state aid highway between this point and Pickensville to D. S. Searcy of Greensville.

Fort Barrancas, Fla.—By city, to Jas. W. Eley for 1,400 lin. ft. of cement curbing at \$1.45 per lin. yd., completed curb and gutter; total bid, \$5,195. Also for laying 588 sq. yds. concrete sidewalks to same firm at \$1.78 per sq. yd., completed foot path. W. W. Vautsmeier, 2d Lt. C. A. C. Constr. Q. M.

Augusta, Ga.—By Streets and Drains Committee to Lewis & Stafford, contract

for laying granite curbing during year 1913 at following prices: Straight curb, at 41½ cents; circular curb, at 43½ cents; yard drain holes, at 65 cents; catch basin holes, at \$1.00; resetting old curb, per lineal foot, 8 cents, and awarding D. A. Bowe contract for laying concrete sidewalks, at 9 7-8 cents per sq. ft.; driveways, at 13 cents.

Washington, Ga.—To West Construction Co., of Chattanooga, Tenn., contract for grading and paving of Main St., in Washington, from public square to terminal properties of the Georgia R. R., on Depot st. Asphalt is material selected for paving, of which there will be 20,000 yds. laid. Total cost of grading and paving will approximate \$60,000.

Galesburg, Ill.—By the Board of Local Improvements to P. H. Tiernan, Macomb, Ill., at \$19,084, for paving Beecher ave. Other bidders were: Brereton Cement Walk Co., \$19,568; M. Heckard & Sons, Canton, Ill., \$19,981; J. B. McAuley, \$19,115; McCarthy Improvement Co., Davenport, Iowa, \$19,659.

Ottawa, Ill.—Contract for paving East Pearl st. has been awarded to Joseph J. Leix, for \$2,800 by board of local improvements.

Fort Wayne, Ind.—By Board of public works to Grace Construction Co., for paving Second st., from Cass to Wells, with sheet asphalt.

Hartford City, Ind.—By commissioners, contracts for Stollar and Spaulding gravel roads, as follows: R. F. Schneider, of Montpelier, the Spaulding road contract, his bid being \$4,583 and H. B. Swoveland the Stollar contract at \$1,967.

Cedar Rapids, Iowa.—By City Council, contracts to Concrete Construction Co., Cedar Rapids, at \$8,470 and \$15,030 respectively for construction of sidewalks and concrete curb and gutter on various streets. Other bids were: F. K. Hahn, \$8,990 and \$17,146; P. P. Smith, \$8,660 and \$18,279; the Ford Paving Co., \$8,610 and \$16,529. J. L. Storey is City Clerk.

Jeffersonville, Ky.—Board of County Commissioners has let following contracts: George Potter road, Thomas F. O'Neil, \$14,640; Mike Maloney road, Robert Grayson, \$3,399.50; Peter Eberle road, Martin F. O'Neil, \$2,210.

Conowingo, Md.—To Spencer & Little, contract on a bid of \$7,921.35, to build a road connecting the Conowingo and Kalmia roads.

Elkton, Md.—By Good Roads Commission of Maryland, to S. Ralph Andrews, of Cambridge, contract to macadamize the Elkton-North East road.

East Douglas, Mass.—Charles E. Horne of Millbury has been awarded contract for building stone road to Douglas Center. Sum of \$3,000 was appropriated by town and \$1,500 received from State. It is hoped to extend road as far as Douglas Center cemetery.

Swampscott, Mass.—By Board of Selectmen, contract for curbstones to M. McDonough, as follows: Straight, 65c. a sq. yd.; curved, 85c. sq. yd. The contract for the tar work was awarded to J. H. McLaughlin, at plain work, 45c. a yd.; skimcoat, 27c. a yd. Contract for laying granolithic has been awarded to Michael McDonough for \$1.60 a sq. yd. for straight work and \$2 for driveways.

Worcester, Mass.—By Street Commissioner to New England Contracting Co., 9 Bellevue st., Worcester, at 0.01 1-7c per sq. yd. for 1-6 gal. of oil applied, or 8-9c for 1-8 gal. applied. The American Car Sprinkler Co., Worcester, bid 1.2c for 1-6 gal. and 1c for 1-8 gal. oil applied on about 2,000,000 sq. yds. streets. A. T. Rhodes is Comr. Noted Mar. 27.

Fulton, Mo.—Commissioners of Fulton special road district have let contract for graveling several main roads to J. H. Sutherland Construction Co. of Kansas City. Improvements will cover fourteen miles and cost will be approximately \$30,000.

Jersey City, N. J.—Boulevard Commissioners have awarded contracts as follows: For road binder, Standard Oil Co., at 8¼, 6¼ and 6 cents per gal.; delivery and spreading to cost 2 cents a gallon more. Road oil contract went to New Jersey Oil Works at 5½ cents a gallon. Crushed stone contracts for Sections 3 and 4 were awarded to August Thiel at from \$1.25 to \$1.85 a cubic yd. For sections 1 and 2, Jos. Murphy & Son's bids of \$1.85 to \$2.15 a cubic yd. were accepted. Contracts for paving sand went to Joseph Murphy & Sons for \$1.75 a cubic yard.

Schenectady, N. Y.—To J. F. Shanley Co., Newark, N. J., for paving two brick streets at \$1.60 for block wearing surface, 69c. for concrete foundation,